#### ADALIMUMAB-ADBM- adalimumab-adbm Boehringer Ingelheim Pharmaceuticals, Inc.

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#### HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use ADALIMUMAB-ADBM safely and effectively. See full prescribing information for ADALIMUMAB-ADBM.

# ADALIMUMAB-ADBM injection, for subcutaneous use

Initial U.S. Approval: 2017

This product is CYLTEZO<sup>®</sup> (adalimumab-adbm). CYLTEZO (adalimumab-adbm) is biosimilar<sup>\*</sup> to HUMIRA<sup>®</sup> (adalimumab).

#### WARNING: SERIOUS INFECTIONS AND MALIGNANCY

See full prescribing information for complete boxed warning.

SERIOUS INFECTIONS (5.1, 6.1):

- Increased risk of serious infections leading to hospitalization or death, including tuberculosis (TB), bacterial sepsis, invasive fungal infections (such as histoplasmosis), and infections due to other opportunistic pathogens.
- Discontinue Adalimumab-adbm if a patient develops a serious infection or sepsis during treatment.
- Perform test for latent TB; if positive, start treatment for TB prior to starting Adalimumab-adbm.
- Monitor all patients for active TB during treatment, even if initial latent TB test is negative.

MALIGNANCY (5.2):

- Lymphoma and other malignancies, some fatal, have been reported in children and adolescent patients treated with TNF blockers including adalimumab products.
- Post-marketing cases of hepatosplenic T-cell lymphoma (HSTCL), a rare type of Tcell lymphoma, have occurred in adolescent and young adults with inflammatory bowel disease treated with TNF blockers including adalimumab products.

#### -----RECENT MAJOR CHANGES ------

Indications and Usage, Uveitis (1.9)	6/2023
Dosage and Administration, Plaque Psoriasis or Adult Uveitis (2.5)	6/2023
Dosage and Administration, General Considerations for Administration (2.8)	4/2024
Warnings and Precautions, Malignancies (5.2)	6/2023
Warnings and Precautions, Neurologic Reactions (5.5)	6/2023

#### ..... INDICATIONS AND USAGE

Adalimumab-adbm is a tumor necrosis factor (TNF) blocker indicated for:

- **Rheumatoid Arthritis (RA) (1.1):** reducing signs and symptoms, inducing major clinical response, inhibiting the progression of structural damage, and improving physical function in adult patients with moderately to severely active RA.
- Juvenile Idiopathic Arthritis (JIA) (1.2): reducing signs and symptoms of moderately to severely active polyarticular JIA in patients 2 years of age and older.
- **Psoriatic Arthritis (PsA) (1.3):** reducing signs and symptoms, inhibiting the progression of structural damage, and improving physical function in adult patients with active PsA.
- Ankylosing Spondylitis (AS) (1.4): reducing signs and symptoms in adult patients with active AS.
- Crohn's Disease (CD) (1.5): treatment of moderately to severely active Crohn's disease in adults and pediatric patients 6 years of age and older.
- Ulcerative Colitis (UC) (1.6): treatment of moderately to severely active ulcerative colitis in adult patients.

Limitations of Use: Effectiveness has not been established in patients who have lost response to or

were intolerant to TNF blockers.

- **Plaque Psoriasis (Ps) (1.7):** treatment of adult patients with moderate to severe chronic plaque psoriasis who are candidates for systemic therapy or phototherapy, and when other systemic therapies are medically less appropriate.
- Hidradenitis Suppurativa (HS) (1.8): treatment of moderate to severe hidradenitis suppurativa in adult patients.
- Uveitis (UV) (1.9): treatment of non-infectious intermediate, posterior, and panuveitis in adult patients.
  - ..... DOSAGE AND ADMINISTRATION .....
- Administer by subcutaneous injection (2)

#### Rheumatoid Arthritis, Psoriatic Arthritis, Ankylosing Spondylitis (2.1):

- Adults: 40 mg every other week.
  - Some patients with RA not receiving methotrexate may benefit from increasing the dosage to 40 mg every week or 80 mg every other week.

#### Juvenile Idiopathic Arthritis (2.2):

Pediatric Weight 2 Years of Age and Older	Recommended Dosage
10 kg (22 lbs) to less than 15 kg (33 lbs)	10 mg every other week
15 kg (33 lbs) to less than 30 kg (66 lbs)	20 mg every other week
30 kg (66 lbs) and greater	40 mg every other week

#### Crohn's Disease (2.3):

- *Adults:* 160 mg on Day 1 (given in one day or split over two consecutive days); 80 mg on Day 15; and 40 mg every other week starting on Day 29.
- Pediatric Patients 6 Years of Age and Older:

Pediatric Weight	Recommended Dosage					
Feulatric weight	Days 1 and 15	Starting on Day 29				
17 kg (37 lbs) to less than 40 kg (88 lbs)		20 mg every other week				
40 KY (00 IDS) dilu	Day 1: 160 mg (single dose or split over two consecutive days) Day 15: 80 mg	40 mg every other week				

#### Ulcerative Colitis (2.4):

Adults: 160 mg on Day 1 (given in one day or split over two consecutive days), 80 mg on Day 15 and 40 mg every other week starting on Day 29. Discontinue in patients without evidence of clinical remission by eight weeks (Day 57).

#### Plaque Psoriasis or Adult Uveitis (2.5):

• *Adults:* 80 mg initial dose, followed by 40 mg every other week starting one week after initial dose.

#### Hidradenitis Suppurativa (2.6):

- Adults:
  - Day 1: 160 mg (given in one day or split over two consecutive days)
  - Day 15: 80 mg
  - Day 29 and subsequent doses: 40 mg every week or 80 mg every other week

DOSAGE FORMS AND STRENGTHS
<ul> <li>Injection:</li> <li>Single-dose prefilled pen (Adalimumab-adbm Pen): 40 mg/0.8 mL, 40 mg/0.4 mL (3)</li> <li>Single-dose prefilled glass syringe: 40 mg/0.8 mL, 40 mg/0.4 mL, 20 mg/0.4 mL, 10 mg/0.2 mL (3)</li> </ul>
CONTRAINDICATIONS
None (4)

- *Serious infections:* Do not start Adalimumab-adbm during an active infection. If an infection develops, monitor carefully, and stop Adalimumab-adbm if infection becomes serious. (5.1)
- *Invasive fungal infections:* For patients who develop a systemic illness on Adalimumab-adbm, consider empiric antifungal therapy for those who reside or travel to regions where mycoses are endemic. (5.1)
- *Malignancies:* Incidence of malignancies was greater in adalimumab-treated patients than in controls (5.2)
- Anaphylaxis or serious hypersensitivity reactions may occur (5.3)
- *Hepatitis B virus reactivation:* Monitor HBV carriers during and several months after therapy. If reactivation occurs, stop Adalimumab-adbm and begin anti-viral therapy. (5.4)
- Demyelinating disease: Exacerbation or new onset, may occur. (5.5)
- *Cytopenias, pancytopenia:* Advise patients to seek immediate medical attention if symptoms develop, and consider stopping Adalimumab-adbm. (5.6)
- Heart failure: Worsening or new onset, may occur. (5.8)
- Lupus-like syndrome: Stop Adalimumab-adbm if syndrome develops. (5.9)

Most common adverse reactions (>10%) are: infections (e.g., upper respiratory, sinusitis), injection site reactions, headache and rash. (6.1)

# To report SUSPECTED ADVERSE REACTIONS, contact Boehringer Ingelheim Pharmaceuticals, Inc. at (800) 542-6257 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

----- DRUG INTERACTIONS ------

- Abatacept: Increased risk of serious infection. (5.1, 5.11, 7.2)
- Anakinra: Increased risk of serious infection. (5.1, 5.7, 7.2)
- Live vaccines: Avoid use with Adalimumab-adbm. (5.10, 7.3)

#### See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

\* Biosimilar means that the biological product is approved based on data demonstrating that it is highly similar to an FDA-approved biological product, known as a reference product, and that there are no clinically meaningful differences between the biosimilar product and the reference product. Biosimilarity of Adalimumab-adbm has been demonstrated for the condition(s) of use (e.g., indication(s), dosing regimen(s)), strength(s), dosage form(s), and route(s) of administration described in its Full Prescribing Information.

#### **Revised:** 4/2024

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#### FULL PRESCRIBING INFORMATION

#### WARNING: SERIOUS INFECTIONS AND MALIGNANCY

#### SERIOUS INFECTIONS

Patients treated with adalimumab products, including Adalimumab-adbm, are at increased risk for developing serious infections that may lead to hospitalization or death [see Warnings and Precautions (5.1)]. Most patients who developed these infections were taking concomitant immunosuppressants such as methotrexate or corticosteroids.

Discontinue Adalimumab-adbm if a patient develops a serious infection or sepsis.

Reported infections include:

- Active tuberculosis (TB), including reactivation of latent TB. Patients with TB have frequently presented with disseminated or extrapulmonary disease. Test patients for latent TB before Adalimumab-adbm use and during therapy. Initiate treatment for latent TB prior to Adalimumab-adbm use.
- Invasive fungal infections, including histoplasmosis, coccidioidomycosis, candidiasis, aspergillosis, blastomycosis, and pneumocystosis. Patients with histoplasmosis or other invasive fungal infections may present with disseminated, rather than localized, disease. Antigen and antibody testing for histoplasmosis may be negative in some patients with active infection. Consider empiric antifungal therapy in patients at risk for invasive fungal infections who develop severe systemic illness.
- Bacterial, viral and other infections due to opportunistic pathogens, including Legionella and Listeria.

Carefully consider the risks and benefits of treatment with Adalimumabadbm prior to initiating therapy in patients with chronic or recurrent infection.

Monitor patients closely for the development of signs and symptoms of infection during and after treatment with Adalimumab-adbm, including the possible development of TB in patients who tested negative for latent TB infection prior to initiating therapy [see Warnings and Precautions (5.1) and Adverse Reactions (6.1)].

#### MALIGNANCY

Lymphoma and other malignancies, some fatal, have been reported in children and adolescent patients treated with TNF blockers including adalimumab products [see Warnings and Precautions (5.2)]. Postmarketing cases of hepatosplenic T-cell lymphoma (HSTCL), a rare type of T-cell lymphoma, have been reported in patients treated with TNF blockers including adalimumab products. These cases have had a very aggressive disease course and have been fatal. The majority of reported TNF blocker cases have occurred in patients with Crohn's disease or ulcerative colitis and the majority were in adolescent and young adult males. Almost all these patients had received treatment with azathioprine or 6-mercaptopurine (6-MP) concomitantly with a TNF blocker at or prior to diagnosis. It is uncertain whether the occurrence of HSTCL is related to use of a TNF blocker or a TNF blocker in combination with these other immunosuppressants [see Warnings and Precautions (5.2)].

# **1 INDICATIONS AND USAGE**

# 1.1 Rheumatoid Arthritis

Adalimumab-adbm is indicated for reducing signs and symptoms, inducing major clinical response, inhibiting the progression of structural damage, and improving physical function in adult patients with moderately to severely active rheumatoid arthritis. Adalimumab-adbm can be used alone or in combination with methotrexate or other non-biologic disease-modifying anti-rheumatic drugs (DMARDs).

# 1.2 Juvenile Idiopathic Arthritis

Adalimumab-adbm is indicated for reducing signs and symptoms of moderately to severely active polyarticular juvenile idiopathic arthritis in patients 2 years of age and older. Adalimumab-adbm can be used alone or in combination with methotrexate.

# 1.3 Psoriatic Arthritis

Adalimumab-adbm is indicated for reducing signs and symptoms, inhibiting the progression of structural damage, and improving physical function in adult patients with active psoriatic arthritis. Adalimumab-adbm can be used alone or in combination with non-biologic DMARDs.

# **1.4 Ankylosing Spondylitis**

Adalimumab-adbm is indicated for reducing signs and symptoms in adult patients with active ankylosing spondylitis.

# 1.5 Crohn's Disease

Adalimumab-adbm is indicated for the treatment of moderately to severely active Crohn's disease in adults and pediatric patients 6 years of age and older.

# 1.6 Ulcerative Colitis

Adalimumab-adbm is indicated for the treatment of moderately to severely active ulcerative colitis in adult patients.

# <u>Limitations of Use</u>

The effectiveness of adalimumab products has not been established in patients who have lost response to or were intolerant to TNF blockers [see Clinical Studies (14.7)].

# 1.7 Plaque Psoriasis

Adalimumab-adbm is indicated for the treatment of adult patients with moderate to severe chronic plaque psoriasis who are candidates for systemic therapy or phototherapy, and when other systemic therapies are medically less appropriate.

Adalimumab-adbm should only be administered to patients who will be closely monitored and have regular follow-up visits with a physician [see Warnings and Precautions (5)].

# 1.8 Hidradenitis Suppurativa

Adalimumab-adbm is indicated for the treatment of moderate to severe hidradenitis suppurativa in adult patients.

# 1.9 Uveitis

Adalimumab-adbm is indicated for the treatment of non-infectious intermediate, posterior, and panuveitis in adult patients.

# **2 DOSAGE AND ADMINISTRATION**

# 2.1 Rheumatoid Arthritis, Psoriatic Arthritis, and Ankylosing Spondylitis

The recommended subcutaneous dosage of Adalimumab-adbm for adult patients with rheumatoid arthritis (RA), psoriatic arthritis (PsA), or ankylosing spondylitis (AS) is 40 mg administered every other week. Methotrexate (MTX), other non-biologic DMARDS, glucocorticoids, nonsteroidal anti-inflammatory drugs (NSAIDs), and/or analgesics may be continued during treatment with Adalimumab-adbm. In the treatment of RA, some patients not taking concomitant MTX may derive additional benefit from increasing the dosage of Adalimumab-adbm to 40 mg every week or 80 mg every other week.

# 2.2 Juvenile Idiopathic Arthritis

The recommended subcutaneous dosage of Adalimumab-adbm for patients 2 years of age and older with polyarticular juvenile idiopathic arthritis (JIA) is based on weight as shown below. MTX, glucocorticoids, NSAIDs, and/or analgesics may be continued during treatment with Adalimumab-adbm.

Pediatric Weight (2 Years of Age and older)	Recommended Dosage
10 kg (22 lbs) to less than 15 kg (33 lbs)	10 mg every other week
15 kg (33 lbs) to less than 30 kg (66 lbs)	20 mg every other week
30 kg (66 lbs) and greater	40 mg every other week

Adalimumab products have not been studied in patients with polyarticular JIA less than 2 years of age or in patients with a weight below 10 kg.

# 2.3 Crohn's Disease

<u>Adults</u>

The recommended subcutaneous dosage of Adalimumab-adbm for adult patients with Crohn's disease (CD) is 160 mg initially on Day 1 (given in one day or split over two consecutive days), followed by 80 mg two weeks later (Day 15). Two weeks later (Day 29) begin a dosage of 40 mg every other week. Aminosalicylates and/or corticosteroids may be continued during treatment with Adalimumab-adbm. Azathioprine, 6mercaptopurine (6-MP) [see Warnings and Precautions (5.2)] or MTX may be continued during treatment with Adalimumab-adbm if necessary.

#### **Pediatrics**

The recommended subcutaneous dosage of Adalimumab-adbm for pediatric patients 6 years of age and older with Crohn's disease (CD) is based on body weight as shown below:

Pediatric	Recommended Dosage					
Weight	Days 1 through 15	Starting on Day 29				
	, .	20 mg every other week				
40 kg (88 lbs) and greater	Day 1: 160 mg (single dose or split over two consecutive days) Day 15: 80 mg	40 mg every other week				

# 2.4 Ulcerative Colitis

# <u>Adults</u>

The recommended subcutaneous dosage of Adalimumab-adbm for adult patients with ulcerative colitis is 160 mg initially on Day 1 (given in one day or split over two consecutive days), followed by 80 mg two weeks later (Day 15). Two weeks later (Day 29) continue with a dosage of 40 mg every other week.

Discontinue Adalimumab-adbm in adult patients without evidence of clinical remission by eight weeks (Day 57) of therapy. Aminosalicylates and/or corticosteroids may be continued during treatment with Adalimumab-adbm. Azathioprine and 6-mercaptopurine (6-MP) [see Warnings and Precautions (5.2)] may be continued during treatment with Adalimumab-adbm if necessary.

# 2.5 Plaque Psoriasis or Adult Uveitis

The recommended subcutaneous dosage of Adalimumab-adbm for adult patients with plaque psoriasis (Ps) or uveitis (UV) is an initial dose of 80 mg, followed by 40 mg given every other week starting one week after the initial dose. The use of adalimumab products in moderate to severe chronic Ps beyond one year has not been evaluated in controlled clinical studies.

# 2.6 Hidradenitis Suppurativa

# <u>Adults</u>

The recommended subcutaneous dosage of Adalimumab-adbm for adult patients with hidradenitis suppurativa (HS) is an initial dose of 160 mg (given in one day or split over two consecutive days), followed by 80 mg two weeks later (Day 15). Begin 40 mg weekly or 80 mg every other week dosing two weeks later (Day 29).

# 2.7 Monitoring to Assess Safety

Prior to initiating Adalimumab-adbm and periodically during therapy, evaluate patients for active tuberculosis and test for latent infection [see Warnings and Precautions (5.1)].

# 2.8 General Considerations for Administration

Adalimumab-adbm is intended for use under the guidance and supervision of a physician. A patient may self-inject Adalimumab-adbm or a caregiver may inject Adalimumab-adbm using either the Adalimumab-adbm Pen or prefilled syringe if a physician determines that it is appropriate, and with medical follow-up, as necessary, after proper training in subcutaneous injection technique.

Adalimumab-adbm can be taken out of the refrigerator for 15 to 30 minutes before injecting to allow the liquid to come to room temperature. Do not remove the cap while allowing it to reach room temperature. Carefully inspect the solution in the Adalimumabadbm Pen or prefilled syringe for particulate matter and discoloration prior to subcutaneous administration. If particulates and discolorations are noted, do not use the product. Adalimumab-adbm does not contain preservatives; therefore, discard unused portions of drug remaining from the syringe. NOTE: Instruct patients sensitive to latex not to handle the needle cap of the Adalimumab-adbm 40 mg/0.8 mL and 40 mg/0.4 mL Pen or 40 mg/0.8 mL, 40 mg/0.4 mL, 20 mg/0.4 mL, and 10 mg/0.2 mL prefilled syringes because they contain natural rubber latex [see How Supplied/Storage and Handling (16)].

Instruct patients using the Adalimumab-adbm Pen or prefilled syringe to inject the full amount in the syringe, according to the directions provided in the Instructions for Use [see Instructions for Use].

Injections should occur at separate sites in the thigh or abdomen. Rotate injection sites and do not give injections into areas where the skin is tender, bruised, red or hard.

If a dose is missed, administer the dose as soon as possible. Thereafter, resume dosing at the regular scheduled time.

# **3 DOSAGE FORMS AND STRENGTHS**

Adalimumab-adbm is a clear to slightly opalescent and colorless to slightly yellow solution available as:

#### Pen (Adalimumab-adbm Pen)

- Injection: 40 mg/0.8 mL in a single-dose pen.
- Injection: 40 mg/0.4 mL in a single-dose pen.

#### **Prefilled Syringe**

- Injection: 40 mg/0.8 mL in a single-dose, 1 mL prefilled glass syringe.
- Injection: 40 mg/0.4 mL in a single-dose, 1 mL prefilled glass syringe.
- Injection: 20 mg/0.4 mL in a single-dose, 1 mL prefilled glass syringe.
- Injection: 10 mg/0.2 mL in a single-dose, 1 mL prefilled glass syringe.

# **4 CONTRAINDICATIONS**

# **5 WARNINGS AND PRECAUTIONS**

# **5.1 Serious Infections**

Patients treated with adalimumab products, including Adalimumab-adbm, are at increased risk for developing serious infections involving various organ systems and sites that may lead to hospitalization or death. Opportunistic infections due to bacterial, mycobacterial, invasive fungal, viral, parasitic, or other opportunistic pathogens including aspergillosis, blastomycosis, candidiasis, coccidioidomycosis, histoplasmosis, legionellosis, listeriosis, pneumocystosis and tuberculosis have been reported with TNF blockers. Patients have frequently presented with disseminated rather than localized disease.

The concomitant use of a TNF blocker and abatacept or anakinra was associated with a higher risk of serious infections in patients with rheumatoid arthritis (RA); therefore, the concomitant use of Adalimumab-adbm and these biologic products is not recommended in the treatment of patients with RA [see Warnings and Precautions (5.7, 5.11) and Drug Interactions (7.2)].

Treatment with Adalimumab-adbm should not be initiated in patients with an active infection, including localized infections. Patients 65 years of age and older, patients with co-morbid conditions and/or patients taking concomitant immunosuppressants (such as corticosteroids or methotrexate), may be at greater risk of infection. Consider the risks and benefits of treatment prior to initiating therapy in patients:

- with chronic or recurrent infection;
- who have been exposed to tuberculosis;
- with a history of an opportunistic infection;
- who have resided or traveled in areas of endemic tuberculosis or endemic mycoses, such as histoplasmosis, coccidioidomycosis, or blastomycosis; or
- with underlying conditions that may predispose them to infection.

# <u>Tuberculosis</u>

Cases of reactivation of tuberculosis and new onset tuberculosis infections have been reported in patients receiving adalimumab products, including patients who have previously received treatment for latent or active tuberculosis. Reports included cases of pulmonary and extrapulmonary (i.e., disseminated) tuberculosis. Evaluate patients for tuberculosis risk factors and test for latent infection prior to initiating Adalimumab-adbm and periodically during therapy.

Treatment of latent tuberculosis infection prior to therapy with TNF blocking agents has been shown to reduce the risk of tuberculosis reactivation during therapy. Prior to initiating Adalimumab-adbm, assess if treatment for latent tuberculosis is needed; and consider an induration of  $\geq$ 5 mm a positive tuberculin skin test result, even for patients previously vaccinated with Bacille Calmette-Guerin (BCG).

Consider anti-tuberculosis therapy prior to initiation of Adalimumab-adbm in patients with a past history of latent or active tuberculosis in whom an adequate course of treatment cannot be confirmed, and for patients with a negative test for latent tuberculosis but having risk factors for tuberculosis infection. Despite prophylactic treatment for tuberculosis, cases of reactivated tuberculosis have occurred in patients treated with adalimumab products. Consultation with a physician with expertise in the treatment of tuberculosis is recommended to aid in the decision whether initiating antituberculosis therapy is appropriate for an individual patient.

Strongly consider tuberculosis in the differential diagnosis in patients who develop a new infection during Adalimumab-adbm treatment, especially in patients who have previously or recently traveled to countries with a high prevalence of tuberculosis, or who have had close contact with a person with active tuberculosis.

#### <u>Monitoring</u>

Closely monitor patients for the development of signs and symptoms of infection during and after treatment with Adalimumab-adbm, including the development of tuberculosis in patients who tested negative for latent tuberculosis infection prior to initiating therapy. Tests for latent tuberculosis infection may also be falsely negative while on therapy with Adalimumab-adbm.

Discontinue Adalimumab-adbm if a patient develops a serious infection or sepsis. For a patient who develops a new infection during treatment with Adalimumab-adbm, closely monitor them, perform a prompt and complete diagnostic workup appropriate for an immunocompromised patient, and initiate appropriate antimicrobial therapy.

#### Invasive Fungal Infections

If patients develop a serious systemic illness and they reside or travel in regions where mycoses are endemic, consider invasive fungal infection in the differential diagnosis. Antigen and antibody testing for histoplasmosis may be negative in some patients with active infection. Consider appropriate empiric antifungal therapy, taking into account both the risk for severe fungal infection and the risks of antifungal therapy, while a diagnostic workup is being performed. To aid in the management of such patients, consider consultation with a physician with expertise in the diagnosis and treatment of invasive fungal infections.

# 5.2 Malignancies

Consider the risks and benefits of TNF-blocker treatment including Adalimumab-adbm prior to initiating therapy in patients with a known malignancy other than a successfully treated non-melanoma skin cancer (NMSC) or when considering continuing a TNF blocker in patients who develop a malignancy.

#### Malignancies in Adults

In the controlled portions of clinical trials of some TNF-blockers, including adalimumab products, more cases of malignancies have been observed among TNF-blocker-treated adult patients compared to control-treated adult patients. During the controlled portions of 39 global adalimumab clinical trials in adult patients with rheumatoid arthritis (RA), psoriatic arthritis (PsA), ankylosing spondylitis (AS), Crohn's disease (CD), ulcerative colitis (UC), plaque psoriasis (Ps), hidradenitis suppurativa (HS) and uveitis (UV), malignancies, other than non-melanoma (basal cell and squamous cell) skin cancer, were observed at a rate (95% confidence interval) of 0.7 (0.48, 1.03) per 100 patient-years among 7973 adalimumab-treated patients versus a rate of 0.7 (0.41, 1.17) per 100 patient-years among 4848 control-treated patients (median duration of treatment of 4 months for adalimumab-treated patients and 4 months for control-treated patients). In 52 global controlled and uncontrolled clinical trials of adalimumab in adult patients with RA, PsA, AS, CD, UC, Ps, HS and UV, the most frequently observed malignancies, other than lymphoma and NMSC, were breast, colon, prostate, lung, and melanoma. The malignancies in adalimumab-treated patients in the controlled and uncontrolled portions of the studies were similar in type and number to what would be expected in the general U.S. population according to the SEER database (adjusted for age, gender, and race).<sup>1</sup>

In controlled trials of other TNF blockers in adult patients at higher risk for malignancies (i.e., patients with COPD with a significant smoking history and cyclophosphamide-treated patients with Wegener's granulomatosis), a greater portion of malignancies occurred in the TNF blocker group compared to the control group.

#### Non-Melanoma Skin Cancer

During the controlled portions of 39 global adalimumab clinical trials in adult patients with RA, PsA, AS, CD, UC, Ps, HS and UV, the rate (95% confidence interval) of NMSC was 0.8 (0.52, 1.09) per 100 patient-years among adalimumab-treated patients and 0.2 (0.10, 0.59) per 100 patient-years among control-treated patients. Examine all patients, and in particular patients with a medical history of prior prolonged immunosuppressant therapy or psoriasis patients with a history of PUVA treatment for the presence of NMSC prior to and during treatment with Adalimumab-adbm.

#### Lymphoma and Leukemia

In the controlled portions of clinical trials of all the TNF-blockers in adults, more cases of lymphoma have been observed among TNF-blocker-treated patients compared to control-treated patients. In the controlled portions of 39 global adalimumab clinical trials in adult patients with RA, PsA, AS, CD, UC, Ps, HS and UV, 2 lymphomas occurred among 7973 adalimumab-treated patients versus 1 among 4848 control-treated patients. In 52 global controlled and uncontrolled clinical trials of adalimumab in adult patients with RA, PsA, AS, CD, UC, Ps, HS and UV with a median duration of approximately 0.7 years, including 24,605 patients and over 40,215 patient-years of adalimumab, the observed rate of lymphomas was approximately 0.11 per 100 patientyears. This is approximately 3-fold higher than expected in the general U.S. population according to the SEER database (adjusted for age, gender, and race). $^1$  Rates of lymphoma in clinical trials of adalimumab cannot be compared to rates of lymphoma in clinical trials of other TNF blockers and may not predict the rates observed in a broader patient population. Patients with RA and other chronic inflammatory diseases, particularly those with highly active disease and/or chronic exposure to immunosuppressant therapies, may be at a higher risk (up to several fold) than the general population for the development of lymphoma, even in the absence of TNF blockers. Post-marketing cases of acute and chronic leukemia have been reported in association with TNF-blocker use in RA and other indications. Even in the absence of TNF-blocker therapy, patients with RA may be at a higher risk (approximately 2-fold) than the general population for the development of leukemia.

# Malignancies in Pediatric Patients and Young Adults

Malignancies, some fatal, have been reported among children, adolescents, and young adults who received treatment with TNF-blockers (initiation of therapy ≤18 years of age), of which Adalimumab-adbm is a member. Approximately half the cases were lymphomas, including Hodgkin's and non-Hodgkin's lymphoma. The other cases represented a variety of different malignancies and included rare malignancies usually

associated with immunosuppression and malignancies that are not usually observed in children and adolescents. The malignancies occurred after a median of 30 months of therapy (range 1 to 84 months). Most of the patients were receiving concomitant immunosuppressants. These cases were reported post-marketing and are derived from a variety of sources including registries and spontaneous postmarketing reports.

Postmarketing cases of hepatosplenic T-cell lymphoma (HSTCL), a rare type of T-cell lymphoma, have been reported in patients treated with TNF blockers including adalimumab products. These cases have had a very aggressive disease course and have been fatal. The majority of reported TNF blocker cases have occurred in patients with Crohn's disease or ulcerative colitis and the majority were in adolescent and young adult males. Almost all of these patients had received treatment with the immunosuppressants azathioprine or 6-mercaptopurine (6-MP) concomitantly with a TNF blocker at or prior to diagnosis. It is uncertain whether the occurrence of HSTCL is related to use of a TNF blocker or a TNF blocker in combination with these other immunosuppressants. The potential risk with the combination of azathioprine or 6mercaptopurine and Adalimumab-adbm should be carefully considered.

# 5.3 Hypersensitivity Reactions

Anaphylaxis and angioneurotic edema have been reported following administration of adalimumab products. If an anaphylactic or other serious allergic reaction occurs, immediately discontinue administration of Adalimumab-adbm and institute appropriate therapy. In clinical trials of adalimumab, hypersensitivity reactions (e.g., rash, anaphylactoid reaction, fixed drug reaction, non-specified drug reaction, urticaria) have been observed.

# 5.4 Hepatitis B Virus Reactivation

Use of TNF blockers, including Adalimumab-adbm, may increase the risk of reactivation of hepatitis B virus (HBV) in patients who are chronic carriers of this virus. In some instances, HBV reactivation occurring in conjunction with TNF blocker therapy has been fatal. The majority of these reports have occurred in patients concomitantly receiving other medications that suppress the immune system, which may also contribute to HBV reactivation. Evaluate patients at risk for HBV infection for prior evidence of HBV infection before initiating TNF blocker therapy. Exercise caution in prescribing TNF blockers for patients identified as carriers of HBV. Adequate data are not available on the safety or efficacy of treating patients who are carriers of HBV with anti-viral therapy in conjunction with TNF blocker therapy to prevent HBV reactivation. For patients who are carriers of HBV and require treatment with TNF blockers, closely monitor such patients for clinical and laboratory signs of active HBV infection throughout therapy and for several months following termination of therapy. In patients who develop HBV reactivation, stop Adalimumab-adbm and initiate effective anti-viral therapy with appropriate supportive treatment. The safety of resuming TNF blocker therapy after HBV reactivation is controlled is not known. Therefore, exercise caution when considering resumption of Adalimumab-adbm therapy in this situation and monitor patients closely.

# 5.5 Neurologic Reactions

Use of TNF blocking agents, including adalimumab products, has been associated with rare cases of new onset or exacerbation of clinical symptoms and/or radiographic

evidence of central nervous system demyelinating disease, including multiple sclerosis (MS) and optic neuritis, and peripheral demyelinating disease, including Guillain-Barré syndrome. Exercise caution in considering the use of Adalimumab-adbm in patients with preexisting or recent-onset central or peripheral nervous system demyelinating disorders; discontinuation of Adalimumab-adbm should be considered if any of these disorders develop. There is a known association between intermediate uveitis and central demyelinating disorders.

# 5.6 Hematological Reactions

Rare reports of pancytopenia including aplastic anemia have been reported with TNF blocking agents. Adverse reactions of the hematologic system, including medically significant cytopenia (e.g., thrombocytopenia, leukopenia) have been infrequently reported with adalimumab products. The causal relationship of these reports to adalimumab products remains unclear. Advise all patients to seek immediate medical attention if they develop signs and symptoms suggestive of blood dyscrasias or infection (e.g., persistent fever, bruising, bleeding, pallor) while on Adalimumab-adbm. Consider discontinuation of Adalimumab-adbm therapy in patients with confirmed significant hematologic abnormalities.

# 5.7 Increased Risk of Infection When Used with Anakinra

Concurrent use of anakinra (an interleukin-1 antagonist) and another TNF-blocker, was associated with a greater proportion of serious infections and neutropenia and no added benefit compared with the TNF-blocker alone in patients with RA. Therefore, the combination of Adalimumab-adbm and anakinra is not recommended [see Drug Interactions (7.2)].

# 5.8 Heart Failure

Cases of worsening congestive heart failure (CHF) and new onset CHF have been reported with TNF blockers. Cases of worsening CHF have also been observed with adalimumab products. Adalimumab products have not been formally studied in patients with CHF; however, in clinical trials of another TNF blocker, a higher rate of serious CHFrelated adverse reactions was observed. Exercise caution when using Adalimumabadbm in patients who have heart failure and monitor them carefully.

# 5.9 Autoimmunity

Treatment with adalimumab products may result in the formation of autoantibodies and, rarely, in the development of a lupus-like syndrome. If a patient develops symptoms suggestive of a lupus-like syndrome following treatment with Adalimumab-adbm, discontinue treatment [see Adverse Reactions (6.1)].

# 5.10 Immunizations

In a placebo-controlled clinical trial of patients with RA, no difference was detected in anti-pneumococcal antibody response between adalimumab and placebo treatment groups when the pneumococcal polysaccharide vaccine and influenza vaccine were administered concurrently with adalimumab. Similar proportions of patients developed protective levels of anti-influenza antibodies between adalimumab and placebo treatment groups; however, titers in aggregate to influenza antigens were moderately lower in patients receiving adalimumab. The clinical significance of this is unknown. Patients on Adalimumab-adbm may receive concurrent vaccinations, except for live vaccines. No data are available on the secondary transmission of infection by live vaccines in patients receiving adalimumab products.

It is recommended that pediatric patients, if possible, be brought up to date with all immunizations in agreement with current immunization guidelines prior to initiating Adalimumab-adbm therapy. Patients on Adalimumab-adbm may receive concurrent vaccinations, except for live vaccines.

The safety of administering live or live-attenuated vaccines in infants exposed to adalimumab products *in utero* is unknown. Risks and benefits should be considered prior to vaccinating (live or live-attenuated) exposed infants [see Use in Specific Populations (8.1, 8.4)].

# 5.11 Increased Risk of Infection When Used with Abatacept

In controlled trials, the concurrent administration of TNF-blockers and abatacept was associated with a greater proportion of serious infections than the use of a TNF-blocker alone; the combination therapy, compared to the use of a TNF-blocker alone, has not demonstrated improved clinical benefit in the treatment of RA. Therefore, the combination of abatacept with TNF-blockers including Adalimumab-adbm is not recommended [see Drug Interactions (7.2)].

# **6 ADVERSE REACTIONS**

The following clinically significant adverse reactions are described elsewhere in the labeling:

- Serious Infections [see Warnings and Precautions (5.1)]
- Malignancies [see Warnings and Precautions (5.2)]
- Hypersensitivity Reactions [see Warnings and Precautions (5.3)]
- Hepatitis B Virus Reactivation [see Warnings and Precautions (5.4)]
- Neurologic Reactions [see Warnings and Precautions (5.5)]
- Hematological Reactions [see Warnings and Precautions (5.6)]
- Heart Failure [see Warnings and Precautions (5.8)]
- Autoimmunity [see Warnings and Precautions (5.9)]

# 6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

The most common adverse reaction with adalimumab was injection site reactions. In placebo-controlled trials, 20% of patients treated with adalimumab developed injection site reactions (erythema and/or itching, hemorrhage, pain or swelling), compared to 14% of patients receiving placebo. Most injection site reactions were described as mild and generally did not necessitate drug discontinuation.

The proportion of patients who discontinued treatment due to adverse reactions during the double-blind, placebo-controlled portion of studies in patients with RA (i.e., Studies RA-I, RA-II, RA-III and RA-IV) was 7% for patients taking adalimumab and 4% for

placebo-treated patients. The most common adverse reactions leading to discontinuation of adalimumab in these RA studies were clinical flare reaction (0.7%), rash (0.3%) and pneumonia (0.3%).

# **Infections**

In the controlled portions of the 39 global adalimumab clinical trials in adult patients with RA, PsA, AS, CD, UC, Ps, HS and UV, the rate of serious infections was 4.3 per 100 patient-years in 7973 adalimumab-treated patients versus a rate of 2.9 per 100 patient-years in 4848 control-treated patients. Serious infections observed included pneumonia, septic arthritis, prosthetic and post-surgical infections, erysipelas, cellulitis, diverticulitis, and pyelonephritis [see Warnings and Precautions (5.1)].

# Tuberculosis and Opportunistic Infections

In 52 global controlled and uncontrolled clinical trials in RA, PsA, AS, CD, UC, Ps, HS and UV that included 24,605 adalimumab-treated patients, the rate of reported active tuberculosis was 0.20 per 100 patient-years and the rate of positive PPD conversion was 0.09 per 100 patient-years. In a subgroup of 10,113 U.S. and Canadian adalimumab-treated patients, the rate of reported active TB was 0.05 per 100 patient-years and the rate of positive PPD conversion was 0.07 per 100 patient-years. These trials included reports of miliary, lymphatic, peritoneal, and pulmonary TB. Most of the TB cases occurred within the first eight months after initiation of therapy and may reflect recrudescence of latent disease. In these global clinical trials, cases of serious opportunistic infections have been reported at an overall rate of 0.05 per 100 patient-years. Some cases of serious opportunistic infections (5.1)].

# <u>Autoantibodies</u>

In the rheumatoid arthritis controlled trials, 12% of patients treated with adalimumab and 7% of placebo-treated patients that had negative baseline ANA titers developed positive titers at week 24. Two patients out of 3046 treated with adalimumab developed clinical signs suggestive of new-onset lupus-like syndrome. The patients improved following discontinuation of therapy. No patients developed lupus nephritis or central nervous system symptoms. The impact of long-term treatment with adalimumab products on the development of autoimmune diseases is unknown.

# Liver Enzyme Elevations

There have been reports of severe hepatic reactions including acute liver failure in patients receiving TNF-blockers. In controlled Phase 3 trials of adalimumab (40 mg SC every other week) in patients with RA, PsA, and AS with control period duration ranging from 4 to 104 weeks, ALT elevations  $\geq 3 \times$  ULN occurred in 3.5% of adalimumab-treated patients and 1.5% of control-treated patients. Since many of these patients in these trials were also taking medications that cause liver enzyme elevations (e.g., NSAIDS, MTX), the relationship between adalimumab and the liver enzyme elevations is not clear. In a controlled Phase 3 trial of adalimumab in patients with polyarticular JIA who were 4 to 17 years, ALT elevations  $\geq 3 \times$  ULN occurred in 4.4% of adalimumab-treated patients and 1.5% of control-treated patients (ALT more common than AST); liver enzyme test elevations were more frequent among those treated with the combination of adalimumab and MTX than those treated with adalimumab alone. In general, these elevations did not lead to discontinuation of adalimumab treatment. No ALT elevations  $\geq 3 \times$  ULN occurred in dalimumab in patients with polyarticular

JIA who were 2 to <4 years.

In controlled Phase 3 trials of adalimumab (initial doses of 160 mg and 80 mg, or 80 mg and 40 mg on Days 1 and 15, respectively, followed by 40 mg every other week) in adult patients with Crohn's Disease with a control period duration ranging from 4 to 52 weeks, ALT elevations  $\geq 3 \times$  ULN occurred in 0.9% of adalimumab-treated patients and 0.9% of control-treated patients. In the Phase 3 trial of adalimumab in pediatric patients with Crohn's disease which evaluated efficacy and safety of two body weight based maintenance dose regimens following body weight based induction therapy up to 52 weeks of treatment, ALT elevations  $\geq 3 \times$  ULN occurred in 2.6% (5/192) of patients, of whom 4 were receiving concomitant immunosuppressants at baseline; none of these patients discontinued due to abnormalities in ALT tests. In controlled Phase 3 trials of adalimumab (initial doses of 160 mg and 80 mg on Days 1 and 15 respectively, followed by 40 mg every other week) in adult patients with UC with control period duration ranging from 1 to 52 weeks, ALT elevations  $\geq 3 \times$  ULN occurred in 1.5% of adalimumabtreated patients and 1.0% of control-treated patients. In controlled Phase 3 trials of adalimumab (initial dose of 80 mg then 40 mg every other week) in patients with Ps with control period duration ranging from 12 to 24 weeks, ALT elevations  $\geq 3 \times ULN$ occurred in 1.8% of adalimumab-treated patients and 1.8% of control-treated patients. In controlled trials of adalimumab (initial doses of 160 mg at Week 0 and 80 mg at Week 2, followed by 40 mg every week starting at Week 4), in subjects with HS with a control period duration ranging from 12 to 16 weeks, ALT elevations  $\geq 3 \times$  ULN occurred in 0.3% of adalimumab-treated subjects and 0.6% of control-treated subjects. In controlled trials of adalimumab (initial doses of 80 mg at Week 0 followed by 40 mg every other week starting at Week 1) in adult patients with uveitis with an exposure of 165.4 PYs and 119.8 PYs in adalimumab-treated and control-treated patients, respectively, ALT elevations  $\geq 3 \times \text{ULN}$  occurred in 2.4% of adalimumab-treated patients and 2.4% of control-treated patients.

# Other Adverse Reactions

# Rheumatoid Arthritis Clinical Studies

The data described below reflect exposure to adalimumab in 2468 patients, including 2073 exposed for 6 months, 1497 exposed for greater than one year and 1380 in adequate and well-controlled studies (Studies RA-I, RA-II, RA-III, and RA-IV). Adalimumab was studied primarily in placebo-controlled trials and in long-term follow up studies for up to 36 months duration. The population had a mean age of 54 years, 77% were female, 91% were Caucasian and had moderately to severely active rheumatoid arthritis. Most patients received 40 mg adalimumab every other week [see Clinical Studies (14.1)].

Table 1 summarizes reactions reported at a rate of at least 5% in patients treated with adalimumab 40 mg every other week compared to placebo and with an incidence higher than placebo. In Study RA-III, the types and frequencies of adverse reactions in the second year open-label extension were similar to those observed in the one-year double-blind portion.

#### Table 1. Adverse Reactions Reported by ≥5% of Patients Treated with Adalimumab During Placebo-Controlled Period of Pooled RA Studies (Studies RA-I, RA-II, RA-III, and RA-IV)

Adalimumab 40

	mg subcutaneous Every Other Week	
	(N=705)	(N=690)
Adverse Reaction (Preferred Term)		
Respiratory		
Upper respiratory infection	17%	13%
Sinusitis	11%	9%
Flu syndrome	7%	6%
Gastrointestinal		
Nausea	9%	8%
Abdominal pain	7%	4%
Laboratory Tests*		
Laboratory test abnormal	8%	7%
Hypercholesterolemia	6%	4%
Hyperlipidemia	7%	5%
Hematuria	5%	4%
Alkaline phosphatase increased	5%	3%
Other		
Headache	12%	8%
Rash	12%	6%
Accidental injury	10%	8%
Injection site reaction**	8%	1%
Back pain	6%	4%
Urinary tract infection	8%	5%
Hypertension	5%	3%
<ul> <li>* Laboratory test abnormalities were</li> <li>European trials</li> <li>** Does not include injection site eryt</li> <li>or swelling</li> </ul>		

#### Less Common Adverse Reactions in Rheumatoid Arthritis Clinical Studies

Other infrequent serious adverse reactions that do not appear in the Warnings and Precautions or Adverse Reaction sections that occurred at an incidence of less than 5% in adalimumab-treated patients in RA studies were:

Body As A Whole: Pain in extremity, pelvic pain, surgery, thorax pain

*Cardiovascular System:* Arrhythmia, atrial fibrillation, chest pain, coronary artery disorder, heart arrest, hypertensive encephalopathy, myocardial infarct, palpitation, pericardial effusion, pericarditis, syncope, tachycardia

*Digestive System:* Cholecystitis, cholelithiasis, esophagitis, gastroenteritis, gastrointestinal hemorrhage, hepatic necrosis, vomiting

Endocrine System: Parathyroid disorder

Hemic And Lymphatic System: Agranulocytosis, polycythemia

Metabolic And Nutritional Disorders: Dehydration, healing abnormal, ketosis,

paraproteinemia, peripheral edema

*Musculo-Skeletal System:* Arthritis, bone disorder, bone fracture (not spontaneous), bone necrosis, joint disorder, muscle cramps, myasthenia, pyogenic arthritis, synovitis, tendon disorder

Neoplasia: Adenoma

Nervous System: Confusion, paresthesia, subdural hematoma, tremor

*Respiratory System:* Asthma, bronchospasm, dyspnea, lung function decreased, pleural effusion

Special Senses: Cataract

Thrombosis: Thrombosis leg

Urogenital System: Cystitis, kidney calculus, menstrual disorder

Juvenile Idiopathic Arthritis Clinical Studies

In general, the adverse reactions in the adalimumab-treated patients in the polyarticular juvenile idiopathic arthritis (JIA) trials (Studies JIA-I and JIA-II) [see Clinical Studies (14.2)] were similar in frequency and type to those seen in adult patients [see Warnings and Precautions (5), Adverse Reactions (6)]. Important findings and differences from adults are discussed in the following paragraphs.

In Study JIA-I, adalimumab was studied in 171 patients who were 4 to 17 years of age, with polyarticular JIA. Severe adverse reactions reported in the study included neutropenia, streptococcal pharyngitis, increased aminotransferases, herpes zoster, myositis, metrorrhagia, and appendicitis. Serious infections were observed in 4% of patients within approximately 2 years of initiation of treatment with adalimumab and included cases of herpes simplex, pneumonia, urinary tract infection, pharyngitis, and herpes zoster.

In Study JIA-I, 45% of patients experienced an infection while receiving adalimumab with or without concomitant MTX in the first 16 weeks of treatment. The types of infections reported in adalimumab-treated patients were generally similar to those commonly seen in polyarticular JIA patients who are not treated with TNF blockers. Upon initiation of treatment, the most common adverse reactions occurring in this patient population treated with adalimumab were injection site pain and injection site reaction (19% and 16%, respectively). A less commonly reported adverse event in patients receiving adalimumab was granuloma annulare which did not lead to discontinuation of adalimumab treatment.

In the first 48 weeks of treatment in Study JIA-I, non-serious hypersensitivity reactions were seen in approximately 6% of patients and included primarily localized allergic hypersensitivity reactions and allergic rash.

In Study JIA-I, 10% of patients treated with adalimumab who had negative baseline antidsDNA antibodies developed positive titers after 48 weeks of treatment. No patient developed clinical signs of autoimmunity during the clinical trial.

Approximately 15% of patients treated with adalimumab developed mild-to-moderate elevations of creatine phosphokinase (CPK) in Study JIA-I. Elevations exceeding 5 times the upper limit of normal were observed in several patients. CPK concentrations decreased or returned to normal in all patients. Most patients were able to continue

adalimumab without interruption.

In Study JIA-II, adalimumab was studied in 32 patients who were 2 to <4 years of age or 4 years of age and older weighing <15 kg with polyarticular JIA. The safety profile for this patient population was similar to the safety profile seen in patients 4 to 17 years of age with polyarticular JIA.

In Study JIA-II, 78% of patients experienced an infection while receiving adalimumab. These included nasopharyngitis, bronchitis, upper respiratory tract infection, otitis media, and were mostly mild to moderate in severity. Serious infections were observed in 9% of patients receiving adalimumab in the study and included dental caries, rotavirus gastroenteritis, and varicella.

In Study JIA-II, non-serious allergic reactions were observed in 6% of patients and included intermittent urticaria and rash, which were all mild in severity.

#### Psoriatic Arthritis and Ankylosing Spondylitis Clinical Studies

Adalimumab has been studied in 395 patients with psoriatic arthritis (PsA) in two placebo-controlled trials and in an open label study and in 393 patients with ankylosing spondylitis (AS) in two placebo-controlled studies [see Clinical Studies (14.3, 14.4)]. The safety profile for patients with PsA and AS treated with adalimumab 40 mg every other week was similar to the safety profile seen in patients with RA, adalimumab Studies RA-I through IV.

#### Crohn's Disease Clinical Studies

*Adults:* The safety profile of adalimumab in 1478 adult patients with Crohn's disease from four placebo-controlled and two open-label extension studies *[see Clinical Studies (14.5)]* was similar to the safety profile seen in patients with RA.

*Pediatric Patients 6 Years to 17 Years:* The safety profile of adalimumab in 192 pediatric patients from one double-blind study (Study PCD-I) and one open-label extension study [*see Clinical Studies (14.6)*] was similar to the safety profile seen in adult patients with Crohn's disease.

During the 4-week open label induction phase of Study PCD-I, the most common adverse reactions occurring in the pediatric population treated with adalimumab were injection site pain and injection site reaction (6% and 5%, respectively).

A total of 67% of children experienced an infection while receiving adalimumab in Study PCD-I. These included upper respiratory tract infection and nasopharyngitis.

A total of 5% of children experienced a serious infection while receiving adalimumab in Study PCD-I. These included viral infection, device related sepsis (catheter), gastroenteritis, H1N1 influenza, and disseminated histoplasmosis.

In Study PCD-I, allergic reactions were observed in 5% of children which were all nonserious and were primarily localized reactions.

#### Ulcerative Colitis Clinical Studies

*Adults:* The safety profile of adalimumab in 1010 adult patients with ulcerative colitis (UC) from two placebo-controlled studies and one open-label extension study [*see Clinical Studies (14.7)*] was similar to the safety profile seen in patients with RA.

# Plaque Psoriasis Clinical Studies

Adalimumab has been studied in 1696 subjects with plaque psoriasis (Ps) in placebocontrolled and open-label extension studies *[see Clinical Studies (14.8)]*. The safety profile for subjects with Ps treated with adalimumab was similar to the safety profile seen in subjects with RA with the following exceptions. In the placebo-controlled portions of the clinical trials in Ps subjects, adalimumab-treated subjects had a higher incidence of arthralgia when compared to controls (3% vs. 1%).

#### Hidradenitis Suppurativa Clinical Studies

Adalimumab has been studied in 727 subjects with hidradenitis suppurativa (HS) in three placebo-controlled studies and one open-label extension study [see Clinical Studies (14.9)]. The safety profile for subjects with HS treated with adalimumab weekly was consistent with the known safety profile of adalimumab.

Flare of HS, defined as  $\geq$ 25% increase from baseline in abscesses and inflammatory nodule counts and with a minimum of 2 additional lesions, was documented in 22 (22%) of the 100 subjects who were withdrawn from adalimumab treatment following the primary efficacy timepoint in two studies.

# Uveitis Clinical Studies

Adalimumab has been studied in 464 adult patients with uveitis (UV) in placebocontrolled and open-label extension studies *[see Clinical Studies (14.10)]*. The safety profile for patients with UV treated with adalimumab was similar to the safety profile seen in patients with RA.

# 6.2 Immunogenicity

The observed incidence of anti-drug antibodies is highly dependent on the sensitivity and specificity of the assay. Differences in assay methods preclude meaningful comparisons of the incidence of anti-drug antibodies in the studies described below with the incidence of anti-drug antibodies, including those of adalimumab or of other adalimumab products.

There are two assays that have been used to measure anti-adalimumab antibodies. With the ELISA, antibodies to adalimumab could be detected only when serum adalimumab concentrations were <2 mcg/mL. The ECL assay can detect anti-adalimumab antibody titers independent of adalimumab concentrations in the serum samples. The incidence of anti-adalimumab antibody (AAA) development in patients treated with adalimumab are presented in Table 2.

# Table 2: Anti-Adalimumab Antibody Development Determined byELISA and ECL Assay in Patients Treated with Adalimumab

Indications	Study		umab Antibody	Anti-Adalimumab Antibody Anti-Adalimumab Antibody Incidence by ELISA (n/N) ECL A (n/I	
	Duration	In all patients who	In patients with serum adalimumab		

			received adalimumab	concentrations <2 mcg/mL	
Rheumato	id Arthritis <sup>a</sup>	6 to 12 months	5% (58/1062)	NR	NA
	4 to 17 years of age <sup>b</sup>	48 weeks	16% (27/171)	NR	NA
Juvenile Idiopathic Arthritis (JIA)	2 to 4 years of age or ≥4 years of age and weighing <15 kg	24 weeks	7% (1/15) <sup>c</sup>	NR	NA
Psoriatic A	Arthritis <sup>d</sup>	48 weeks <sup>e</sup>	13% (24/178)	NR	NA
Ankylosing	g Spondylitis	24 weeks	9% (16/185)	NR	NA
Adult Croł	nn's Disease	56 weeks	3% (7/269)	8% (7/86)	NA
Pediatric C Disease	Crohn's	52 weeks	3% (6/182)	10% (6/58)	NA
Adult Ulce	rative Colitis	52 weeks	5% (19/360)	21% (19/92)	NA
Plaque Pso	oriasis <sup>f</sup>	Up to 52 weeks <sup>g</sup>	8% (77/920)	21% (77/372)	NA
Hidradenit Suppurati		36 weeks	7% (30/461)	28% (58/207) <sup>h</sup>	61% (272/445) <sup>i</sup>
Non-infect	ious Uveitis	52 weeks	5% (12/249)	21% (12/57)	40% (99/249)

n: number of patients with anti-adalimumab antibody; NR: not reported; NA: Not applicable (not performed)

<sup>a</sup> In patients receiving concomitant methotrexate (MTX), the incidence of antiadalimumab antibody was 1% compared to 12% with adalimumab monotherapy

<sup>b</sup> In patients receiving concomitant MTX, the incidence of anti-adalimumab antibody was 6% compared to 26% with adalimumab monotherapy

<sup>c</sup> This patient received concomitant MTX

<sup>d</sup> In patients receiving concomitant MTX, the incidence of antibody development was 7% compared to 1% in RA

<sup>e</sup> Subjects enrolled after completing 2 previous studies of 24 weeks or 12 weeks of treatments.

<sup>f</sup> In plaque psoriasis patients who were on adalimumab monotherapy and subsequently withdrawn from the treatment, the rate of antibodies to adalimumab after retreatment was similar to the rate observed prior to withdrawal

<sup>g</sup> One 12-week Phase 2 study and one 52-week Phase 3 study

<sup>h</sup> Among subjects in the 2 Phase 3 studies who stopped adalimumab treatment for up to 24 weeks and in whom adalimumab serum levels subsequently declined to <2 mcg/mL (approximately 22% of total subjects studied)

<sup>i</sup> No apparent association between antibody development and safety was observed

<sup>j</sup> No correlation of antibody development to safety or efficacy outcomes was observed

*Rheumatoid Arthritis and Psoriatic Arthritis:* Patients in Studies RA-I, RA-II, and RA-III were tested at multiple time points for antibodies to adalimumab using the ELISA during the 6- to 12-month period. No apparent correlation of antibody development to adverse reactions was observed. With monotherapy, patients receiving every other week dosing may develop antibodies more frequently than those receiving weekly dosing. In patients receiving the recommended dosage of 40 mg every other week as monotherapy, the ACR 20 response was lower among antibody-positive patients than among antibody-negative patients. The long-term immunogenicity of adalimumab products is unknown.

# 6.3 Postmarketing Experience

The following adverse reactions have been identified during post-approval use of adalimumab products. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to adalimumab products exposure.

*Gastrointestinal disorders:* Diverticulitis, large bowel perforations including perforations associated with diverticulitis and appendiceal perforations associated with appendicitis, pancreatitis

General disorders and administration site conditions: Pyrexia

Hepato-biliary disorders: Liver failure, hepatitis

Immune system disorders: Sarcoidosis

*Neoplasms benign, malignant and unspecified (including cysts and polyps):* Merkel Cell Carcinoma (neuroendocrine carcinoma of the skin)

*Nervous system disorders:* Demyelinating disorders (e.g., optic neuritis, Guillain-Barré syndrome), cerebrovascular accident

*Respiratory disorders:* Interstitial lung disease, including pulmonary fibrosis, pulmonary embolism

*Skin reactions:* Stevens Johnson Syndrome, cutaneous vasculitis, erythema multiforme, new or worsening psoriasis (all sub-types including pustular and palmoplantar), alopecia, lichenoid skin reaction

Vascular disorders: Systemic vasculitis, deep vein thrombosis

# 7 DRUG INTERACTIONS

# 7.1 Methotrexate

Adalimumab has been studied in rheumatoid arthritis (RA) patients taking concomitant methotrexate (MTX). Although MTX reduced the apparent adalimumab clearance, the data do not suggest the need for dose adjustment of either Adalimumab-adbm or MTX *[see Clinical Pharmacology (12.3)]*.

# 7.2 Biological Products

In clinical studies in patients with RA, an increased risk of serious infections has been observed with the combination of TNF blockers with anakinra or abatacept, with no added benefit; therefore, use of Adalimumab-adbm with abatacept or anakinra is not recommended in patients with RA *[see Warnings and Precautions (5.7, 5.11)]*. A higher rate of serious infections has also been observed in patients with RA treated with rituximab who received subsequent treatment with a TNF blocker. There is insufficient information regarding the concomitant use of Adalimumab-adbm and other biologic products for the treatment of RA, PsA, AS, CD, UC, Ps, HS and UV. Concomitant administration of Adalimumab-adbm with other biologic DMARDS (e.g., anakinra and abatacept) or other TNF blockers is not recommended based upon the possible increased risk for infections and other potential pharmacological interactions.

# 7.3 Live Vaccines

Avoid the use of live vaccines with Adalimumab-adbm [see Warnings and Precautions (5.10)].

# 7.4 Cytochrome P450 Substrates

The formation of CYP450 enzymes may be suppressed by increased concentrations of cytokines (e.g., TNF $\alpha$ , IL-6) during chronic inflammation. It is possible for products that antagonize cytokine activity, such as adalimumab products, to influence the formation of CYP450 enzymes. Upon initiation or discontinuation of Adalimumab-adbm in patients being treated with CYP450 substrates with a narrow therapeutic index, monitoring of the effect (e.g., warfarin) or drug concentration (e.g., cyclosporine or theophylline) is recommended and the individual dose of the drug product may be adjusted as needed.

# **8 USE IN SPECIFIC POPULATIONS**

# 8.1 Pregnancy

# <u>Risk Summary</u>

Available studies with use of adalimumab during pregnancy do not reliably establish an association between adalimumab and major birth defects. Clinical data are available from the Organization of Teratology Information Specialists (OTIS)/MotherToBaby Pregnancy Registry in pregnant women with rheumatoid arthritis (RA) or Crohn's disease (CD) treated with adalimumab. Registry results showed a rate of 10% for major birth defects with first trimester use of adalimumab in pregnant women with RA or CD and a rate of 7.5% for major birth defects in the disease-matched comparison cohort. The lack of pattern of major birth defects is reassuring and differences between exposure groups may have impacted the occurrence of birth defects (*see Data*).

Adalimumab is actively transferred across the placenta during the third trimester of pregnancy and may affect immune response in the *in-utero* exposed infant (*see Clinical Considerations*). In an embryo-fetal perinatal development study conducted in cynomolgus monkeys, no fetal harm or malformations were observed with intravenous administration of adalimumab during organogenesis and later in gestation, at doses that produced exposures up to approximately 373 times the maximum recommended human dose (MRHD) of 40 mg subcutaneous without methotrexate (*see Data*).

The estimated background risk of major birth defects and miscarriage for the indicated

populations is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

#### **Clinical Considerations**

# Disease-associated maternal and embryo/fetal risk

Published data suggest that the risk of adverse pregnancy outcomes in women with RA or inflammatory bowel disease (IBD) is associated with increased disease activity. Adverse pregnancy outcomes include preterm delivery (before 37 weeks of gestation), low birth weight (less than 2500 g) infants, and small for gestational age at birth.

# Fetal/Neonatal Adverse Reactions

Monoclonal antibodies are increasingly transported across the placenta as pregnancy progresses, with the largest amount transferred during the third trimester (*see Data*). Risks and benefits should be considered prior to administering live or live-attenuated vaccines to infants exposed to adalimumab products *in utero* [*see Use in Specific Populations* (8.4)].

#### <u>Data</u>

# Human Data

A prospective cohort pregnancy exposure registry conducted by OTIS/MotherToBaby in the U.S. and Canada between 2004 and 2016 compared the risk of major birth defects in live-born infants of 221 women (69 RA, 152 CD) treated with adalimumab during the first trimester and 106 women (74 RA, 32 CD) not treated with adalimumab.

The proportion of major birth defects among live-born infants in the adalimumab-treated and untreated cohorts was 10% (8.7% RA, 10.5% CD) and 7.5% (6.8% RA, 9.4% CD), respectively. The lack of pattern of major birth defects is reassuring and differences between exposure groups may have impacted the occurrence of birth defects. This study cannot reliably establish whether there is an association between adalimumab and major birth defects because of methodological limitations of the registry, including small sample size, the voluntary nature of the study, and the non-randomized design.

In an independent clinical study conducted in ten pregnant women with IBD treated with adalimumab, adalimumab concentrations were measured in maternal serum as well as in cord blood (n=10) and infant serum (n=8) on the day of birth. The last dose of adalimumab was given between 1 and 56 days prior to delivery. Adalimumab concentrations were 0.16-19.7 mcg/mL in cord blood, 4.28-17.7 mcg/mL in infant serum, and 0-16.1 mcg/mL in maternal serum. In all but one case, the cord blood concentration of adalimumab was higher than the maternal serum concentration, suggesting adalimumab actively crosses the placenta. In addition, one infant had serum concentrations at each of the following: 6 weeks (1.94 mcg/mL), 7 weeks (1.31 mcg/mL), 8 weeks (0.93 mcg/mL), and 11 weeks (0.53 mcg/mL), suggesting adalimumab can be detected in the serum of infants exposed *in utero* for at least 3 months from birth.

# Animal Data

In an embryo-fetal perinatal development study, pregnant cynomolgus monkeys received adalimumab from gestation days 20 to 97 at doses that produced exposures

up to 373 times that achieved with the MRHD without methotrexate (on an AUC basis with maternal IV doses up to 100 mg/kg/week). Adalimumab did not elicit harm to the fetuses or malformations.

# 8.2 Lactation

# <u>Risk Summary</u>

Limited data from case reports in the published literature describe the presence of adalimumab in human milk at infant doses of 0.1% to 1% of the maternal serum concentration. Published data suggest that the systemic exposure to a breastfed infant is expected to be low because adalimumab is a large molecule and is degraded in the gastrointestinal tract. However, the effects of local exposure in the gastrointestinal tract are unknown. There are no reports of adverse effects of adalimumab products on the breastfed infant and no effects on milk production. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for Adalimumab-adbm and any potential adverse effects on the breastfed child from Adalimumab-adbm or from the underlying maternal condition.

# 8.4 Pediatric Use

The safety and effectiveness of Adalimumab-adbm have been established for:

- reducing signs and symptoms of moderately to severely active polyarticular JIA in pediatric patients 2 years of age and older.
- the treatment of moderately to severely active Crohn's disease in pediatric patients 6 years of age and older.

Pediatric assessments for Adalimumab-adbm demonstrate that Adalimumab-adbm is safe and effective for pediatric patients in indications for which Humira (adalimumab) is approved. However, Adalimumab-adbm is not approved for such indications due to marketing exclusivity for Humira (adalimumab).

Due to their inhibition of TNF $\alpha$ , adalimumab products administered during pregnancy could affect immune response in the *in utero*-exposed newborn and infant. Data from eight infants exposed to adalimumab *in utero* suggest adalimumab crosses the placenta *[see Use in Specific Populations (8.1)]*. The clinical significance of elevated adalimumab concentrations in infants is unknown. The safety of administering live or live-attenuated vaccines in exposed infants is unknown. Risks and benefits should be considered prior to vaccinating (live or live-attenuated) exposed infants.

Post-marketing cases of lymphoma, including hepatosplenic T-cell lymphoma and other malignancies, some fatal, have been reported among children, adolescents, and young adults who received treatment with TNF-blockers including adalimumab products [see Warnings and Precautions (5.2)].

# Juvenile Idiopathic Arthritis

In Study JIA-I, adalimumab was shown to reduce signs and symptoms of active polyarticular JIA in patients 4 to 17 years of age [see Clinical Studies (14.2)]. In Study JIA-II, the safety profile for patients 2 to <4 years of age was similar to the safety profile for patients 4 to 17 years of age with polyarticular JIA [see Adverse Reactions (6.1)]. Adalimumab products have not been studied in patients with polyarticular JIA less than 2 years of age or in patients with a weight below 10 kg.

The safety of adalimumab in patients in the polyarticular JIA trials was generally similar to that observed in adults with certain exceptions [see Adverse Reactions (6.1)].

The safety and effectiveness of Adalimumab-adbm have not been established in pediatric patients with JIA less than 2 years of age.

#### Pediatric Crohn's Disease

The safety and effectiveness of Adalimumab-adbm for the treatment of moderately to severely active Crohn's disease have been established in pediatric patients 6 years of age and older. Use of Adalimumab-adbm for this indication is supported by evidence from adequate and well-controlled studies in adults with additional data from a randomized, double-blind, 52-week clinical study of two dose concentrations of adalimumab in 192 pediatric patients (6 years to 17 years of age) [see Adverse Reactions (6.1), Clinical Pharmacology (12.2, 12.3), Clinical Studies (14.6)]. The adverse reaction profile in patients 6 years to 17 years of age was similar to adults.

The safety and effectiveness of Adalimumab-adbm have not been established in pediatric patients with Crohn's disease less than 6 years of age.

# 8.5 Geriatric Use

A total of 519 RA patients 65 years of age and older, including 107 patients 75 years of age and older, received adalimumab in clinical studies RA-I through IV. No overall difference in effectiveness was observed between these patients and younger patients. The frequency of serious infection and malignancy among adalimumab-treated patients 65 years of age and older was higher than for those less than 65 years of age. Consider the benefits and risks of Adalimumab-adbm in patients 65 years of age and older. In patients treated with Adalimumab-adbm, closely monitor for the development of infection or malignancy [see Warnings and Precautions (5.1, 5.2)].

# **10 OVERDOSAGE**

Doses up to 10 mg/kg have been administered to patients in clinical trials without evidence of dose-limiting toxicities. In case of overdosage, it is recommended that the patient be monitored for any signs or symptoms of adverse reactions or effects and appropriate symptomatic treatment instituted immediately.

# **11 DESCRIPTION**

Adalimumab-adbm is a tumor necrosis factor blocker. Adalimumab-adbm is a recombinant human IgG1 monoclonal antibody produced by recombinant DNA technology in a mammalian cell (Chinese Hamster Ovary (CHO)) expression system and is purified by a process that includes specific viral inactivation and removal steps. It consists of 1330 amino acids and has a molecular weight of approximately 148 kilodaltons.

Adalimumab-adbm injection is supplied as a sterile, preservative-free solution of adalimumab-adbm for subcutaneous administration. The drug product is supplied as either a single-dose, prefilled pen (Adalimumab-adbm Pen) or as a single-dose, 1 mL prefilled glass syringe. Enclosed within the pen is a single-dose, 1 mL prefilled glass syringe. The solution of Adalimumab-adbm is clear to slightly opalescent and colorless to slightly yellow, with a pH of about 5.5.

Each 40 mg/0.4 mL prefilled syringe or prefilled pen delivers 0.4 mL (40 mg) of drug product. Each 0.4 mL of Adalimumab-adbm contains adalimumab-adbm (40 mg), glacial acetic acid (0.03 mg), polysorbate 80 (0.2 mg), sodium acetate trihydrate (0.47 mg), trehalose dihydrate (30.3 mg), and Water for Injection, USP.

Each 40 mg/0.8 mL prefilled syringe or prefilled pen delivers 0.8 mL (40 mg) of drug product. Each 0.8 mL of Adalimumab-adbm contains adalimumab-adbm (40 mg), glacial acetic acid (0.13 mg), polysorbate 80 (0.8 mg), sodium acetate trihydrate (2.4 mg), trehalose dihydrate (65.0 mg), and Water for Injection, USP.

Each 20 mg/0.4 mL prefilled syringe delivers 0.4 mL (20 mg) of drug product. Each 0.4 mL of Adalimumab-adbm contains adalimumab-adbm (20 mg), glacial acetic acid (0.06 mg), polysorbate 80 (0.4 mg), sodium acetate trihydrate (1.21 mg), trehalose dihydrate (32.5 mg), and Water for Injection, USP.

Each 10 mg/0.2 mL prefilled syringe delivers 0.2 mL (10 mg) of drug product. Each 0.2 mL of Adalimumab-adbm contains adalimumab-adbm (10 mg), glacial acetic acid (0.03 mg), polysorbate 80 (0.2 mg), sodium acetate trihydrate (0.61 mg), trehalose dihydrate (16.3 mg), and Water for Injection, USP.

# **12 CLINICAL PHARMACOLOGY**

# 12.1 Mechanism of Action

Adalimumab products bind specifically to TNF-alpha and block its interaction with the p55 and p75 cell surface TNF receptors. Adalimumab products also lyse surface TNF expressing cells *in vitro* in the presence of complement. Adalimumab products do not bind or inactivate lymphotoxin (TNF-beta). TNF is a naturally occurring cytokine that is involved in normal inflammatory and immune responses. Elevated concentrations of TNF are found in the synovial fluid of patients with RA, JIA, PsA, and AS and play an important role in both the pathologic inflammation and the joint destruction that are hallmarks of these diseases. Increased concentrations of TNF are also found in psoriasis plaques. In Ps, treatment with Adalimumab-adbm may reduce the epidermal thickness and infiltration of inflammatory cells. The relationship between these pharmacodynamic activities and the mechanism(s) by which adalimumab products exert their clinical effects is unknown.

Adalimumab products also modulate biological responses that are induced or regulated by TNF, including changes in the concentrations of adhesion molecules responsible for leukocyte migration (ELAM-1, VCAM-1, and ICAM-1 with an IC<sub>50</sub> of  $1-2 \times 10^{-10}$ M).

# **12.2 Pharmacodynamics**

After treatment with adalimumab, a decrease in concentrations of acute phase reactants of inflammation (C-reactive protein [CRP] and erythrocyte sedimentation rate [ESR]) and serum cytokines (IL-6) was observed compared to baseline in patients with rheumatoid arthritis. A decrease in CRP concentrations was also observed in patients with Crohn's disease, ulcerative colitis and hidradenitis suppurativa. Serum concentrations of matrix metalloproteinases (MMP-1 and MMP-3) that produce tissue remodeling responsible for cartilage destruction were also decreased after adalimumab administration.

# 12.3 Pharmacokinetics

The pharmacokinetics of adalimumab were linear over the dose range of 0.5 to 10 mg/kg following administration of a single intravenous dose (adalimumab products are not approved for intravenous use). Following 20, 40, and 80 mg every other week and every week subcutaneous administration, adalimumab mean serum trough concentrations at steady state increased approximately proportionally with dose in RA patients. The mean terminal half-life was approximately 2 weeks, ranging from 10 to 20 days across studies. Healthy subjects and patients with RA displayed similar adalimumab pharmacokinetics.

Adalimumab exposure in patients treated with 80 mg every other week is estimated to be comparable with that in patients treated with 40 mg every week.

#### <u>Absorption</u>

The average absolute bioavailability of adalimumab following a single 40 mg subcutaneous dose was 64%. The mean time to reach the maximum concentration was 5.5 days (131  $\pm$  56 hours) and the maximum serum concentration was 4.7  $\pm$  1.6 mcg/mL in healthy subjects following a single 40 mg subcutaneous administration of adalimumab.

#### **Distribution**

The distribution volume ( $V_{ss}$ ) ranged from 4.7 to 6.0 L following intravenous administration of doses ranging from 0.25 to 10 mg/kg in RA patients.

#### **Elimination**

The single dose pharmacokinetics of adalimumab in RA patients were determined in several studies with intravenous doses ranging from 0.25 to 10 mg/kg. The systemic clearance of adalimumab is approximately 12 mL/hr. In long-term studies with dosing more than two years, there was no evidence of changes in clearance over time in RA patients.

#### Patient Population

*Rheumatoid Arthritis and Ankylosing Spondylitis:* In patients receiving 40 mg adalimumab every other week, adalimumab mean steady-state trough concentrations were approximately 5 mcg/mL and 8 to 9 mcg/mL, without and with MTX concomitant treatment, respectively. Adalimumab concentrations in the synovial fluid from five rheumatoid arthritis patients ranged from 31 to 96% of those in serum. The pharmacokinetics of adalimumab in patients with AS were similar to those in patients with RA.

*Psoriatic Arthritis:* In patients receiving 40 mg every other week, adalimumab mean steady-state trough concentrations were 6 to 10 mcg/mL and 8.5 to 12 mcg/mL, without and with MTX concomitant treatment, respectively.

*Plaque Psoriasis:* Adalimumab mean steady-state trough concentration was approximately 5 to 6 mcg/mL during 40 mg adalimumab every other week treatment.

*Adult Uveitis*: Adalimumab mean steady concentration was approximately 8 to 10 mcg/mL during adalimumab 40 mg every other week treatment.

*Adult Hidradenitis Suppurativa:* Adalimumab trough concentrations were approximately 7 to 8 mcg/mL at Week 2 and Week 4, respectively, after receiving 160 mg on Week 0

followed by 80 mg on Week 2. Mean steady-state trough concentrations at Week 12 through Week 36 were approximately 7 to 11 mcg/mL during adalimumab 40 mg every week treatment.

*Adult Crohn's Disease:* Adalimumab mean trough concentrations were approximately 12 mcg/mL at Week 2 and Week 4 after receiving 160 mg on Week 0 followed by 80 mg on Week 2. Mean steady-state trough concentrations were 7 mcg/mL at Week 24 and Week 56 during 40 mg adalimumab every other week treatment.

Adult Ulcerative Colitis: Adalimumab mean trough concentrations were approximately 12 mcg/mL at Week 2 and Week 4 after receiving 160 mg on Week 0 followed by 80 mg on Week 2. Mean steady-state trough concentrations were approximately 8 mcg/mL and 15 mcg/mL at Week 52 after receiving a dose of 40 mg adalimumab every other week and 40 mg every week, respectively.

#### Anti-Drug Antibody Effects on Pharmacokinetics

*Rheumatoid Arthritis:* A trend toward higher apparent clearance of adalimumab in the presence of anti-adalimumab antibodies was identified.

*Hidradenitis Suppurativa:* In subjects with moderate to severe HS, antibodies to adalimumab were associated with reduced serum adalimumab concentrations. In general, the extent of reduction in serum adalimumab concentrations is greater with increasing titers of antibodies to adalimumab.

#### Specific Populations

*Geriatric Patients:* A lower clearance with increasing age was observed in patients with RA aged 40 to >75 years.

# Pediatric Patients:

# Juvenile Idiopathic Arthritis:

- 4 years to 17 years of age: The adalimumab mean steady-state trough concentrations were 6.8 mcg/mL and 10.9 mcg/mL in patients weighing <30 kg receiving 20 mg adalimumab subcutaneously every other week as monotherapy or with concomitant MTX, respectively. The adalimumab mean steady-state trough concentrations were 6.6 mcg/mL and 8.1 mcg/mL in patients weighing ≥30 kg receiving 40 mg adalimumab subcutaneously every other week as monotherapy or with MTX concomitant treatment, respectively.
- 2 years to <4 years of age or 4 years of age and older weighing <15 kg: The adalimumab mean steady-state trough adalimumab concentrations were 6.0 mcg/mL and 7.9 mcg/mL in patients receiving adalimumab subcutaneously every other week as monotherapy or with MTX concomitant treatment, respectively.

<u>Pediatric Crohn's Disease</u>: Adalimumab mean  $\pm$  SD concentrations were 15.7 $\pm$ 6.5 mcg/mL at Week 4 following 160 mg at Week 0 and 80 mg at Week 2, and 10.5 $\pm$ 6.0 mcg/mL at Week 52 following 40 mg every other week dosing in patients weighing  $\geq$ 40 kg. Adalimumab mean  $\pm$  SD concentrations were 10.6 $\pm$ 6.1 mcg/mL at Week 4 following dosing 80 mg at Week 0 and 40 mg at Week 2, and 6.9 $\pm$ 3.6 mcg/mL at Week 52 following 20 mg every other week dosing in patients weighing <40 kg.

*Male and Female Patients:* No gender-related pharmacokinetic differences were observed after correction for a patient's body weight. Healthy subjects and patients with rheumatoid arthritis displayed similar adalimumab pharmacokinetics.

*Patients with Renal or Hepatic Impairment:* No pharmacokinetic data are available in patients with hepatic or renal impairment.

*Rheumatoid factor or CRP concentrations:* Minor increases in apparent clearance were predicted in RA patients receiving doses lower than the recommended dose and in RA patients with high rheumatoid factor or CRP concentrations. These increases are not likely to be clinically important.

#### Drug Interaction Studies:

*Methotrexate*: MTX reduced adalimumab apparent clearance after single and multiple dosing by 29% and 44% respectively, in patients with RA *[see Drug Interactions (7.1)]*.

# **13 NONCLINICAL TOXICOLOGY**

# 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Long-term animal studies of adalimumab products have not been conducted to evaluate the carcinogenic potential or its effect on fertility.

# **14 CLINICAL STUDIES**

# 14.1 Rheumatoid Arthritis

The efficacy and safety of adalimumab were assessed in five randomized, double-blind studies in patients  $\geq$ 18 years of age with active rheumatoid arthritis (RA) diagnosed according to American College of Rheumatology (ACR) criteria. Patients had at least 6 swollen and 9 tender joints. Adalimumab was administered subcutaneously in combination with methotrexate (MTX) (12.5 to 25 mg, Studies RA-I, RA-III and RA-V) or as monotherapy (Studies RA-II and RA-V) or with other disease-modifying anti-rheumatic drugs (DMARDs) (Study RA-IV).

Study RA-I evaluated 271 patients who had failed therapy with at least one but no more than four DMARDs and had inadequate response to MTX. Doses of 20, 40 or 80 mg of adalimumab or placebo were given every other week for 24 weeks.

Study RA-II evaluated 544 patients who had failed therapy with at least one DMARD. Doses of placebo, 20 or 40 mg of adalimumab were given as monotherapy every other week or weekly for 26 weeks.

Study RA-III evaluated 619 patients who had an inadequate response to MTX. Patients received placebo, 40 mg of adalimumab every other week with placebo injections on alternate weeks, or 20 mg of adalimumab weekly for up to 52 weeks. Study RA-III had an additional primary endpoint at 52 weeks of inhibition of disease progression (as detected by X-ray results). Upon completion of the first 52 weeks, 457 patients enrolled in an open-label extension phase in which 40 mg of adalimumab was administered every other week for up to 5 years.

Study RA-IV assessed safety in 636 patients who were either DMARD-naive or were permitted to remain on their pre-existing rheumatologic therapy provided that therapy was stable for a minimum of 28 days. Patients were randomized to 40 mg of adalimumab or placebo every other week for 24 weeks. Study RA-V evaluated 799 patients with moderately to severely active RA of less than 3 years duration who were  $\geq$ 18 years old and MTX naive. Patients were randomized to receive either MTX (optimized to 20 mg/week by week 8), adalimumab 40 mg every other week or adalimumab/MTX combination therapy for 104 weeks. Patients were evaluated for signs and symptoms, and for radiographic progression of joint damage. The median disease duration among patients enrolled in the study was 5 months. The median MTX dose achieved was 20 mg.

#### Clinical Response

The percent of adalimumab treated patients achieving ACR 20, 50 and 70 responses in Studies RA-II and III are shown in Table 3.

Study RA-II Monotherapy (26 weeks)				Study RA-III Methotrexate Combination (24 and 52 weeks)		
Response	Placebo	Adalimumab	Adalimumab	Placebo/MTX	Adalimumab/MTX	
		40 mg every other week	40 mg weekly		40 mg every other week	
	N=110	N=113	N=103	N=200	N=207	
ACR20						
Month 6	19%	46%*	53%*	30%	63%*	
Month 12	NA	NA	NA	24%	59%*	
ACR50						
Month 6	8%	22%*	35%*	10%	39%*	
Month 12	NA	NA	NA	10%	42%*	
ACR70						
Month 6	2%	12%*	18%*	3%	21%*	
Month 12	NA	NA	NA	5%	23%*	
* p<0.01, a	dalimum	ab <i>vs.</i> placebo		1		

# Table 3. ACR Responses in Studies RA-II and RA-III (Percent of Patients)

The results of Study RA-I were similar to Study RA-III; patients receiving adalimumab 40 mg every other week in Study RA-I also achieved ACR 20, 50 and 70 response rates of 65%, 52% and 24%, respectively, compared to placebo responses of 13%, 7% and 3% respectively, at 6 months (p<0.01).

The results of the components of the ACR response criteria for Studies RA-II and RA-III are shown in Table 4. ACR response rates and improvement in all components of ACR response were maintained to week 104. Over the 2 years in Study RA-III, 20% of adalimumab patients receiving 40 mg every other week achieved a major clinical response, defined as maintenance of an ACR 70 response over a 6-month period. ACR responses were maintained in similar proportions of patients for up to 5 years with continuous adalimumab treatment in the open-label portion of Study RA-III.

# Table 4. Components of ACR Response in Studies RA-II and RA-III

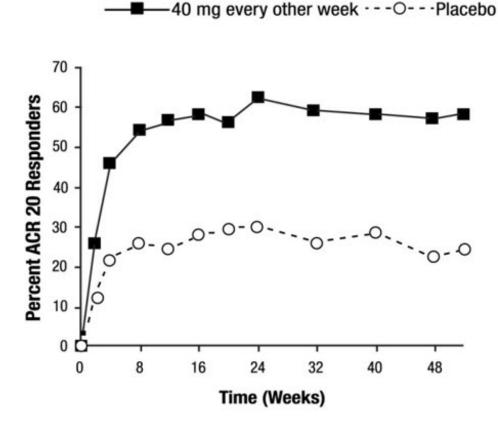
	Study RA-II				Study RA-III				
Parameter	n) N=110		Adalimumab <sup>a</sup> N=113		Placebo/	МТХ	Adalimuma	mumab <sup>a</sup> /MTX	
(median)					N=200		N=207		
	Baseline	Wk 26	Baseline	Wk 26	Baseline	Wk 24	Baseline	Wk 24	
Number of tender joints (0-68)	35	26	31	16*	26	15	24	8*	
Number of swollen joints (0-66)	19	16	18	10*	17	11	18	5*	
Physician global assessment <sup>b</sup>	7.0	6.1	6.6	3.7*	6.3	3.5	6.5	2.0*	
Patient global assessment <sup>b</sup>	7.5	6.3	7.5	4.5*	5.4	3.9	5.2	2.0*	
Pain <sup>b</sup>	7.3	6.1	7.3	4.1*	6.0	3.8	5.8	2.1*	
Disability index (HAQ) <sup>c</sup>	2.0	1.9	1.9	1.5*	1.5	1.3	1.5	0.8*	
CRP (mg/dL)	3.9	4.3	4.6	1.8*	1.0	0.9	1.0	0.4*	
<sup>a</sup> 40 mg adali						<			
<sup>b</sup> Visual analo <sup>c</sup> Disability Ind worst, measu arise, eat, wa	dex of the ures the p	e Hea atier	alth Asses nt's ability	smer to pe	nt Questio erform the	follo	wing: dress,	/groom,	

\* p<0.001, adalimumab vs. placebo, based on mean change from baseline

The time course of ACR 20 response for Study RA-III is shown in Figure 1.

In Study RA-III, 85% of patients with ACR 20 responses at week 24 maintained the response at 52 weeks. The time course of ACR 20 response for Study RA-I and Study RA-II were similar.

# Figure 1. Study RA-III ACR 20 Responses over 52 Weeks



In Study RA-IV, 53% of patients treated with adalimumab 40 mg every other week plus standard of care had an ACR 20 response at week 24 compared to 35% on placebo plus standard of care (p<0.001). No unique adverse reactions related to the combination of adalimumab and other DMARDs were observed.

In Study RA-V with MTX naive patients with recent onset RA, the combination treatment with adalimumab plus MTX led to greater percentages of patients achieving ACR responses than either MTX monotherapy or adalimumab monotherapy at Week 52 and responses were sustained at Week 104 (see Table 5).

Response	MTX <sup>b</sup> N=257	Adalimumab <sup>c</sup> N=274	Adalimumab/MTX N=268
ACR20			
Week 52	63%	54%	73%
Week 104	56%	49%	69%
ACR50			
Week 52	46%	41%	62%
Week 104	43%	37%	59%
ACR70			
Week 52	27%	26%	46%
Week 104	28%	28%	47%
Major Clinical Response <sup>a</sup>	28%	25%	49%

Table 5.	ACR Resi	onse in St	udv RA-V	(Percent	of Patients)

<sup>a</sup> Major clinical response is defined as achieving an ACR70 response for a continuous six-month period

At Week 52, all individual components of the ACR response criteria for Study RA-V improved in the adalimumab/MTX group and improvements were maintained to Week 104.

#### Radiographic Response

In Study RA-III, structural joint damage was assessed radiographically and expressed as change in Total Sharp Score (TSS) and its components, the erosion score and Joint Space Narrowing (JSN) score, at month 12 compared to baseline. At baseline, the median TSS was approximately 55 in the placebo and 40 mg every other week groups. The results are shown in Table 6. Adalimumab/MTX treated patients demonstrated less radiographic progression than patients receiving MTX alone at 52 weeks.

# Table 6. Radiographic Mean Changes Over 12 Months in StudyRA-III

	Placebo/MTX	Adalimumab/MTX 40 mg every other week	Placebo/MTX- Adalimumab/MTX (95% Confidence Interval*)	P- value**			
Total Sharp score	2.7	0.1	2.6 (1.4, 3.8)	<0.001			
Erosion score	1.6	0.0	1.6 (0.9, 2.2)	<0.001			
JSN score	1.0	0.1	0.9 (0.3, 1.4)	0.002			
*95% confidence intervals for the differences in change scores between MTX and adalimumab. **Based on rank analysis							

In the open-label extension of Study RA-III, 77% of the original patients treated with any dose of adalimumab were evaluated radiographically at 2 years. Patients maintained inhibition of structural damage, as measured by the TSS. Fifty-four percent had no progression of structural damage as defined by a change in the TSS of zero or less. Fifty-five percent (55%) of patients originally treated with 40 mg adalimumab every other week have been evaluated radiographically at 5 years. Patients had continued inhibition of structural damage with 50% showing no progression of structural damage defined by a change in the TSS of zero or less.

In Study RA-V, structural joint damage was assessed as in Study RA-III. Greater inhibition of radiographic progression, as assessed by changes in TSS, erosion score and JSN was observed in the adalimumab/MTX combination group as compared to either the MTX or adalimumab monotherapy group at Week 52 as well as at Week 104 (see Table 7).

		MTX <sup>a</sup> N=257	Adalimumab <sup>a,b</sup> N=274	Adalimumab/MTX N=268		
52 Weeks	Total Sharp score	5.7 (4.2, 7.3)	3.0 (1.7, 4.3)	1.3 (0.5, 2.1)		
	Erosion score	3.7 (2.7, 4.8)	1.7 (1.0, 2.4)	0.8 (0.4, 1.2)		
	JSN score	2.0 (1.2, 2.8)	1.3 (0.5, 2.1)	0.5 (0.0, 1.0)		
104 Weeks	Total Sharp score	10.4 (7.7, 13.2)	5.5 (3.6, 7.4)	1.9 (0.9, 2.9)		
	Erosion score	6.4 (4.6, 8.2)	3.0 (2.0, 4.0)	1.0 (0.4, 1.6)		
	JSN score	4.1 (2.7, 5.4)	2.6 (1.5, 3.7)	0.9 (0.3, 1.5)		
* mean (95% confidence interval) <sup>a</sup> p<0.001, adalimumab/MTX <i>vs.</i> MTX at 52 and 104 weeks and for adalimumab/MTX <i>vs.</i> adalimumab at 104 weeks <sup>b</sup> p<0.01, for adalimumab/MTX <i>vs.</i> adalimumab at 52 weeks						

Table 7. Radiographic Mean Change\* in Study RA-V

#### Physical Function Response

In studies RA-I through IV, adalimumab showed significantly greater improvement than placebo in the disability index of Health Assessment Questionnaire (HAQ-DI) from baseline to the end of study, and significantly greater improvement than placebo in the health-outcomes as assessed by The Short Form Health Survey (SF 36). Improvement was seen in both the Physical Component Summary (PCS) and the Mental Component Summary (MCS).

In Study RA-III, the mean (95% CI) improvement in HAQ-DI from baseline at week 52 was 0.60 (0.55, 0.65) for the adalimumab patients and 0.25 (0.17, 0.33) for placebo/MTX (p<0.001) patients. Sixty-three percent of adalimumab-treated patients achieved a 0.5 or greater improvement in HAQ-DI at week 52 in the double-blind portion of the study. Eighty-two percent of these patients maintained that improvement through week 104 and a similar proportion of patients maintained this response through week 260 (5 years) of open-label treatment. Mean improvement in the SF-36 was maintained through the end of measurement at week 156 (3 years).

In Study RA-V, the HAQ-DI and the physical component of the SF-36 showed greater improvement (p<0.001) for the adalimumab/MTX combination therapy group versus either the MTX monotherapy or the adalimumab monotherapy group at Week 52, which was maintained through Week 104.

#### 14.2 Juvenile Idiopathic Arthritis

The safety and efficacy of adalimumab was assessed in two studies (Studies JIA-I and JIA-II) in patients with active polyarticular juvenile idiopathic arthritis (JIA).

#### Study JIA-I

The safety and efficacy of adalimumab were assessed in a multicenter, randomized, withdrawal, double-blind, parallel-group study in 171 patients who were 4 to 17 years of age with polyarticular JIA. In the study, the patients were stratified into two groups: MTX-treated or non-MTX-treated. All patients had to show signs of active moderate or severe disease despite previous treatment with NSAIDs, analgesics, corticosteroids, or

DMARDS. Patients who received prior treatment with any biologic DMARDS were excluded from the study.

The study included four phases: an open-label lead in phase (OL-LI; 16 weeks), a doubleblind randomized withdrawal phase (DB; 32 weeks), an open-label extension phase (OLE-BSA; up to 136 weeks), and an open-label fixed dose phase (OLE-FD; 16 weeks). In the first three phases of the study, adalimumab was administered based on body surface area at a dose of 24 mg/m<sup>2</sup> up to a maximum total body dose of 40 mg subcutaneously (SC) every other week. In the OLE-FD phase, the patients were treated with 20 mg of adalimumab SC every other week if their weight was less than 30 kg and with 40 mg of adalimumab SC every other week if their weight was 30 kg or greater. Patients remained on stable doses of NSAIDs and or prednisone ( $\leq$ 0.2 mg/kg/day or 10 mg/day maximum).

Patients demonstrating a Pediatric ACR 30 response at the end of OL-LI phase were randomized into the double blind (DB) phase of the study and received either adalimumab or placebo every other week for 32 weeks or until disease flare. Disease flare was defined as a worsening of  $\geq$ 30% from baseline in  $\geq$ 3 of 6 Pediatric ACR core criteria,  $\geq$ 2 active joints, and improvement of >30% in no more than 1 of the 6 criteria. After 32 weeks or at the time of disease flare during the DB phase, patients were treated in the open-label extension phase based on the BSA regimen (OLE-BSA), before converting to a fixed dose regimen based on body weight (OLE-FD phase).

#### Study JIA-I Clinical Response

At the end of the 16-week OL-LI phase, 94% of the patients in the MTX stratum and 74% of the patients in the non-MTX stratum were Pediatric ACR 30 responders. In the DB phase significantly fewer patients who received adalimumab experienced disease flare compared to placebo, both without MTX (43% *vs.* 71%) and with MTX (37% *vs.* 65%). More patients treated with adalimumab continued to show pediatric ACR 30/50/70 responses at Week 48 compared to patients treated with placebo. Pediatric ACR responses were maintained for up to two years in the OLE phase in patients who received adalimumab throughout the study.

#### Study JIA-II

Adalimumab was assessed in an open-label, multicenter study in 32 patients who were 2 to <4 years of age or 4 years of age and older weighing <15 kg with moderately to severely active polyarticular JIA. Most patients (97%) received at least 24 weeks of adalimumab treatment dosed 24 mg/m<sup>2</sup> up to a maximum of 20 mg every other week as a single SC injection up to a maximum of 120 weeks duration. During the study, most patients used concomitant MTX, with fewer reporting use of corticosteroids or NSAIDs. The primary objective of the study was evaluation of safety [see Adverse Reactions (6.1)].

#### 14.3 Psoriatic Arthritis

The safety and efficacy of adalimumab was assessed in two randomized, double-blind, placebo-controlled studies in 413 patients with psoriatic arthritis (PsA). Upon completion of both studies, 383 patients enrolled in an open-label extension study, in which 40 mg adalimumab was administered every other week.

Study PsA-I enrolled 313 adult patients with moderately to severely active PsA (>3 swollen and >3 tender joints) who had an inadequate response to NSAID therapy in one

of the following forms: (1) distal interphalangeal (DIP) involvement (N=23); (2) polyarticular arthritis (absence of rheumatoid nodules and presence of plaque psoriasis) (N=210); (3) arthritis mutilans (N=1); (4) asymmetric PsA (N=77); or (5) AS-like (N=2). Patients on MTX therapy (158 of 313 patients) at enrollment (stable dose of  $\leq$  30 mg/week for >1 month) could continue MTX at the same dose. Doses of adalimumab 40 mg or placebo every other week were administered during the 24-week double-blind period of the study.

Compared to placebo, treatment with adalimumab resulted in improvements in the measures of disease activity (see Tables 8 and 9). Among patients with PsA who received adalimumab, the clinical responses were apparent in some patients at the time of the first visit (two weeks) and were maintained up to 88 weeks in the ongoing openlabel study. Similar responses were seen in patients with each of the subtypes of psoriatic arthritis, although few patients were enrolled with the arthritis mutilans and ankylosing spondylitis-like subtypes. Responses were similar in patients who were or were not receiving concomitant MTX therapy at baseline.

Patients with psoriatic involvement of at least three percent body surface area (BSA) were evaluated for Psoriatic Area and Severity Index (PASI) responses. At 24 weeks, the proportions of patients achieving a 75% or 90% improvement in the PASI were 59% and 42% respectively, in the adalimumab group (N=69), compared to 1% and 0% respectively, in the placebo group (N=69) (p<0.001). PASI responses were apparent in some patients at the time of the first visit (two weeks). Responses were similar in patients who were or were not receiving concomitant MTX therapy at baseline.

	Placebo N=162	Adalimumab* N=151
ACR20		
Week 12	14%	58%
Week 24	15%	57%
ACR50		
Week 12	4%	36%
Week 24	6%	39%
ACR70		
Week 12	1%	20%
Week 24	1%	23%
*p<0.001 for all compariso	ons between adalimumab a	and placebo

Table 8. ACR Response in Study PsA-I (Percent of Patients)

#### Table 9. Components of Disease Activity in Study PsA-I

	Placebo N=162			umab* L51
Parameter: median	Baseline 24 weeks		Baseline	24 weeks
Number of tender joints <sup>a</sup>	23.0	17.0	20.0	5.0
Number of swollen joints <sup>b</sup>	11.0	9.0	11.0	3.0
Physician global	520	10 0	55 A	16.0

assessment <sup>c</sup>	ں.در	43.0	ں.در	TO.0	
Patient global assessment <sup>c</sup>	49.5	49.0	48.0	20.0	
Pain <sup>c</sup>	49.0	49.0	54.0	20.0	
Disability index (HAQ) <sup>d</sup>	1.0	0.9	1.0	0.4	
CRP (mg/dL) <sup>e</sup>	0.8	0.7	0.8	0.2	
CRP (mg/dL)e0.80.70.80.2*p<0.001 for adalimumab vs. placebo comparisons based on median changesaScale on mediana Scale 0-78bScale 0-76cc Visual analog scale; 0=best, 100=worstdDisability Index of the Health Assessment Questionnaire; 0=best, 3=worst; measures the patient's ability to perform the following: dress/groom, arise, eat, walk, reach, grip, maintain hygiene, and					
maintain daily activity. <sup>e</sup> Normal range: 0-0.287 mg/dL					

Similar results were seen in an additional, 12-week study in 100 patients with moderate to severe psoriatic arthritis who had suboptimal response to DMARD therapy as manifested by  $\geq$ 3 tender joints and  $\geq$ 3 swollen joints at enrollment.

#### Radiographic Response

Radiographic changes were assessed in the PsA studies. Radiographs of hands, wrists, and feet were obtained at baseline and Week 24 during the double-blind period when patients were on adalimumab or placebo and at Week 48 when all patients were on open-label adalimumab. A modified Total Sharp Score (mTSS), which included distal interphalangeal joints (i.e., not identical to the TSS used for rheumatoid arthritis), was used by readers blinded to treatment group to assess the radiographs.

Adalimumab-treated patients demonstrated greater inhibition of radiographic progression compared to placebo-treated patients and this effect was maintained at 48 weeks (see Table 10).

	Placebo N=141	Adalimumab N=133			
	Week 24	Week 24	Week 48		
Baseline mean	22.1	23.4	23.4		
Mean Change ± SD	$0.9 \pm 3.1$	$-0.1 \pm 1.7$	$-0.2 \pm 4.9^{*}$		
* <0.001 for the difference between adalimumab, Week 48 and Placebo, Week 24 (primary analysis)					

### Table 10. Change in Modified Total Sharp Score in PsoriaticArthritis

#### Physical Function Response

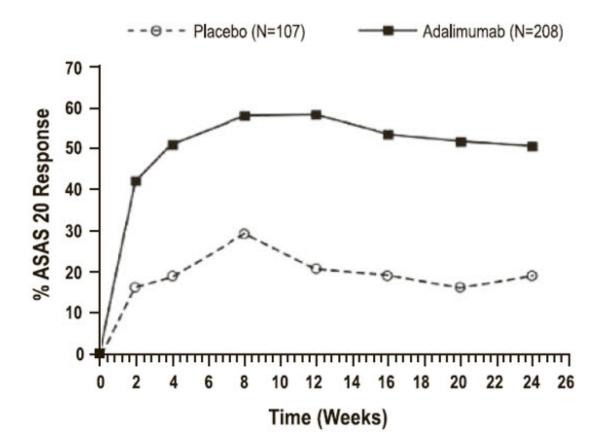
In Study PsA-I, physical function and disability were assessed using the HAQ Disability Index (HAQ-DI) and the SF-36 Health Survey. Patients treated with 40 mg of adalimumab every other week showed greater improvement from baseline in the HAQ-DI score (mean decreases of 47% and 49% at Weeks 12 and 24 respectively) in comparison to placebo (mean decreases of 1% and 3% at Weeks 12 and 24 respectively). At Weeks 12 and 24, patients treated with adalimumab showed greater improvement from baseline in the SF-36 Physical Component Summary score compared to patients treated with placebo, and no worsening in the SF-36 Mental Component Summary score. Improvement in physical function based on the HAQ-DI was maintained for up to 84 weeks through the open-label portion of the study.

#### 14.4 Ankylosing Spondylitis

The safety and efficacy of adalimumab 40 mg every other week was assessed in 315 adult patients in a randomized, 24 week double-blind, placebo-controlled study in patients with active ankylosing spondylitis (AS) who had an inadequate response to glucocorticoids, NSAIDs, analgesics, methotrexate or sulfasalazine. Active AS was defined as patients who fulfilled at least two of the following three criteria: (1) a Bath AS disease activity index (BASDAI) score  $\geq$ 4 cm, (2) a visual analog score (VAS) for total back pain  $\geq$ 40 mm, and (3) morning stiffness  $\geq$ 1 hour. The blinded period was followed by an open-label period during which patients received adalimumab 40 mg every other week subcutaneously for up to an additional 28 weeks.

Improvement in measures of disease activity was first observed at Week 2 and maintained through 24 weeks as shown in Figure 2 and Table 11.

Responses of patients with total spinal ankylosis (n=11) were similar to those without total ankylosis.



#### Figure 2. ASAS 20 Response By Visit, Study AS-I

respectively, of patients receiving adalimumab, compared to 21%, 10%, and 5% respectively, of patients receiving placebo (p < 0.001). Similar responses were seen at Week 24 and were sustained in patients receiving open-label adalimumab for up to 52 weeks.

A greater proportion of patients treated with adalimumab (22%) achieved a low level of disease activity at 24 weeks (defined as a value <20 [on a scale of 0 to 100 mm] in each of the four ASAS response parameters) compared to patients treated with placebo (6%).

	Placebo N=107			numab 208
	Baseline	Week 24	Baseline	Week 24
	mean	mean	mean	mean
ASAS 20 Response Criteria*				
Patient's Global				
Assessment of Disease	65	60	63	38
Activity <sup>a</sup> *				
Total back pain*	67	58	65	37
Inflammation <sup>b</sup> *	6.7	5.6	6.7	3.6
BASFI <sup>C</sup> *	56	51	52	34
BASDAI <sup>d</sup> score*	6.3	5.5	6.3	3.7
BASMI <sup>e</sup> score*	4.2	4.1	3.8	3.3
Tragus to wall (cm)	15.9	15.8	15.8	15.4
Lumbar flexion (cm)	4.1	4.0	4.2	4.4
Cervical rotation (degrees)	42.2	42.1	48.4	51.6
Lumbar side flexion (cm)	8.9	9.0	9.7	11.7
Intermalleolar distance	92.9	94.0	93.5	100.8
(cm)	92.9	94.0	32.2	100.0
CRP <sup>f</sup> *	2.2	2.0	1.8	0.6
<sup>a</sup> Percent of subjects with at measured on a Visual Analog				

Table 1	1.	Components	of	Ankylosing	Spondylitis	Disease
			A	ctivity		

"severe"

<sup>b</sup> Mean of questions 5 and 6 of BASDAI (defined in 'd')

<sup>c</sup> Bath Ankylosing Spondylitis Functional Index

<sup>d</sup> Bath Ankylosing Spondylitis Disease Activity Index

<sup>e</sup> Bath Ankylosing Spondylitis Metrology Index

C-Reactive Protein (mg/dL)

\* statistically significant for comparisons between adalimumab and placebo at Week 24

A second randomized, multicenter, double-blind, placebo-controlled study of 82 patients with ankylosing spondylitis showed similar results.

Patients treated with adalimumab achieved improvement from baseline in the Ankylosing Spondylitis Quality of Life Questionnaire (ASQoL) score (-3.6 vs. -1.1) and in the Short

Form Health Survey (SF-36) Physical Component Summary (PCS) score (7.4 *vs.* 1.9) compared to placebo-treated patients at Week 24.

#### 14.5 Adult Crohn's Disease

The safety and efficacy of multiple doses of adalimumab were assessed in adult patients with moderately to severely active Crohn's disease, CD, (Crohn's Disease Activity Index (CDAI)  $\geq$ 220 and  $\leq$ 450) in randomized, double-blind, placebo-controlled studies. Concomitant stable doses of aminosalicylates, corticosteroids, and/or immunomodulatory agents were permitted, and 79% of patients continued to receive at least one of these medications.

Induction of clinical remission (defined as CDAI <150) was evaluated in two studies. In Study CD-I, 299 TNF-blocker naive patients were randomized to one of four treatment groups: the placebo group received placebo at Weeks 0 and 2, the 160/80 group received 160 mg adalimumab at Week 0 and 80 mg at Week 2, the 80/40 group received 80 mg at Week 0 and 40 mg at Week 2, and the 40/20 group received 40 mg at Week 0 and 20 mg at Week 2. Clinical results were assessed at Week 4.

In the second induction study, Study CD-II, 325 patients who had lost response to, or were intolerant to, previous infliximab therapy were randomized to receive either 160 mg adalimumab at Week 0 and 80 mg at Week 2, or placebo at Weeks 0 and 2. Clinical results were assessed at Week 4.

Maintenance of clinical remission was evaluated in Study CD-III. In this study, 854 patients with active disease received open-label adalimumab, 80 mg at week 0 and 40 mg at Week 2. Patients were then randomized at Week 4 to 40 mg adalimumab every other week, 40 mg adalimumab every week, or placebo. The total study duration was 56 weeks. Patients in clinical response (decrease in CDAI  $\geq$ 70) at Week 4 were stratified and analyzed separately from those not in clinical response at Week 4.

#### Induction of Clinical Remission

A greater percentage of the patients treated with 160/80 mg adalimumab achieved induction of clinical remission versus placebo at Week 4 regardless of whether the patients were TNF blocker naive (CD-I), or had lost response to or were intolerant to infliximab (CD-II) (see Table 12).

		CD-I	CD-II		
	Placebo N=74	Adalimumab 160/80 mg N=76	Placebo N=166	Adalimumab 160/80 mg N=159	
Week 4					
Clinical remission	12%	36%*	7%	21%*	
Clinical response	34%	58%**	34%	52%**	

#### Table 12. Induction of Clinical Remission in Studies CD-I and CD-II (Percent of Patients)

Clinical remission is CDAI score <150; clinical response is decrease in CDAI of at least 70 points.

#### Maintenance of Clinical Remission

In Study CD-III at Week 4, 58% (499/854) of patients were in clinical response and were assessed in the primary analysis. At Weeks 26 and 56, greater proportions of patients who were in clinical response at Week 4 achieved clinical remission in the adalimumab 40 mg every other week maintenance group compared to patients in the placebo maintenance group (see Table 13). The group that received adalimumab therapy every week did not demonstrate significantly higher remission rates compared to the group that received adalimumab every other week.

	Placebo	40 mg Adalimumab every other week
	N=170	N=172
Week 26		
Clinical remission	17%	40%*
Clinical response	28%	54%*
Week 56		
Clinical remission	12%	36%*
Clinical response	18%	43%*
Clinical remission is CDAI sco of at least 70 points. *p<0.001 for adalimumab <i>vs</i> proportions		al response is decrease in CDAI ise comparisons of

### Table 13. Maintenance of Clinical Remission in CD-III (Percent of<br/>Patients)

Of those in response at Week 4 who attained remission during the study, patients in the adalimumab every other week group maintained remission for a longer time than patients in the placebo maintenance group. Among patients who were not in response by Week 12, therapy continued beyond 12 weeks did not result in significantly more responses.

#### 14.6 Pediatric Crohn's Disease

A randomized, double-blind, 52-week clinical study of 2 dose concentrations of adalimumab (Study PCD-I) was conducted in 192 pediatric patients (6 to 17 years of age) with moderately to severely active Crohn's disease (defined as Pediatric Crohn's Disease Activity Index (PCDAI) score >30). Enrolled patients had over the previous two year period an inadequate response to corticosteroids or an immunomodulator (i.e., azathioprine, 6-mercaptopurine, or methotrexate). Patients who had previously received a TNF blocker were allowed to enroll if they had previously had loss of response or intolerance to that TNF blocker.

Patients received open-label induction therapy at a dose based on their body weight ( $\geq$ 40 kg and <40 kg). Patients weighing  $\geq$ 40 kg received 160 mg (at Week 0) and 80 mg (at Week 2). Patients weighing <40 kg received 80 mg (at Week 0) and 40 mg (at

Week 2). At Week 4, patients within each body weight category ( $\geq$ 40 kg and <40 kg) were randomized 1:1 to one of two maintenance dose regimens (high dose and low dose). The high dose was 40 mg every other week for patients weighing  $\geq$ 40 kg and 20 mg every other week for patients weighing <40 kg. The low dose was 20 mg every other week for patients weighing  $\geq$ 40 kg and 10 mg every other week for patients weighing <40 kg.

Concomitant stable dosages of corticosteroids (prednisone dosage  $\leq$ 40 mg/day or equivalent) and immunomodulators (azathioprine, 6-mercaptopurine, or methotrexate) were permitted throughout the study.

At Week 12, patients who experienced a disease flare (increase in PCDAI of  $\geq$ 15 from Week 4 and absolute PCDAI >30) or who were non-responders (did not achieve a decrease in the PCDAI of  $\geq$ 15 from baseline for 2 consecutive visits at least 2 weeks apart) were allowed to dose-escalate (i.e., switch from blinded every other week dosing to blinded every week dosing); patients who dose-escalated were considered treatment failures.

At baseline, 38% of patients were receiving corticosteroids, and 62% of patients were receiving an immunomodulator. Forty-four percent (44%) of patients had previously lost response or were intolerant to a TNF blocker. The median baseline PCDAI score was 40.

Of the 192 patients total, 188 patients completed the 4 week induction period, 152 patients completed 26 weeks of treatment, and 124 patients completed 52 weeks of treatment. Fifty-one percent (51%) (48/95) of patients in the low maintenance dose group dose-escalated, and 38% (35/93) of patients in the high maintenance dose group dose-escalated.

At Week 4, 28% (52/188) of patients were in clinical remission (defined as PCDAI  $\leq$ 10).

The proportions of patients in clinical remission (defined as PCDAI  $\leq$ 10) and clinical response (defined as reduction in PCDAI of at least 15 points from baseline) were assessed at Weeks 26 and 52.

At both Weeks 26 and 52, the proportion of patients in clinical remission and clinical response was numerically higher in the high dose group compared to the low dose group (Table 14). The recommended maintenance regimen is 20 mg every other week for patients weighing <40 kg and 40 mg every other week for patients weighing ≥40 kg. Every week dosing is not the recommended maintenance dosing regimen [see Dosage and Administration (2.3)].

	Low Maintenance Dose <sup>†</sup> (20 or 10 mg every other week) N = 95	High Maintenance Dose <sup>#</sup> (40 or 20 mg every other week) N = 93
Week 26		
Clinical Remission <sup>‡</sup>	28%	39%
Clinical Response <sup>§</sup>	48%	59%
Week 52		

Table 14. Clinical Remission and Clinical Response in Study PCD-I

Clinical Remission <sup>‡</sup>	23%	33%				
Clinical Response <sup>§</sup>	28%	42%				
<sup>†</sup> The low maintenance dose was 20 mg every other week for patients weighing $\geq$ 40 kg and 10 mg every other week for patients weighing <40 kg.						

<sup>#</sup> The high maintenance dose was 40 mg every other week for patients weighing ≥40 kg and 20 mg every other week for patients weighing <40 kg. <sup>‡</sup> Clinical remission defined as PCDAI ≤10.

<sup>§</sup> Clinical response defined as reduction in PCDAI of at least 15 points from baseline.

#### 14.7 Adult Ulcerative Colitis

The safety and efficacy of adalimumab were assessed in adult patients with moderately to severely active ulcerative colitis (Mayo score 6 to 12 on a 12 point scale, with an endoscopy subscore of 2 to 3 on a scale of 0 to 3) despite concurrent or prior treatment with immunosuppressants such as corticosteroids, azathioprine, or 6-MP in two randomized, double-blind, placebo-controlled clinical studies (Studies UC-I and UC-II). Both studies enrolled TNF-blocker naive patients, but Study UC-II also allowed entry of patients who lost response to or were intolerant to TNF-blockers. Forty percent (40%) of patients enrolled in Study UC-II had previously used another TNF-blocker.

Concomitant stable doses of aminosalicylates and immunosuppressants were permitted. In Studies UC-I and II, patients were receiving aminosalicylates (69%), corticosteroids (59%) and/or azathioprine or 6-MP (37%) at baseline. In both studies, 92% of patients received at least one of these medications.

Induction of clinical remission (defined as Mayo score  $\leq 2$  with no individual subscores >1) at Week 8 was evaluated in both studies. Clinical remission at Week 52 and sustained clinical remission (defined as clinical remission at both Weeks 8 and 52) were evaluated in Study UC-II.

In Study UC-I, 390 TNF-blocker naive patients were randomized to one of three treatment groups for the primary efficacy analysis. The placebo group received placebo at Weeks 0, 2, 4 and 6. The 160/80 group received 160 mg adalimumab at Week 0 and 80 mg at Week 2, and the 80/40 group received 80 mg adalimumab at Week 0 and 40 mg at Week 2. After Week 2, patients in both adalimumab treatment groups received 40 mg every other week.

In Study UC-II, 518 patients were randomized to receive either adalimumab 160 mg at Week 0, 80 mg at Week 2, and 40 mg every other week starting at Week 4 through Week 50, or placebo starting at Week 0 and every other week through Week 50. Corticosteroid taper was permitted starting at Week 8.

In both Studies UC-I and UC-II, a greater percentage of the patients treated with 160/80 mg of adalimumab compared to patients treated with placebo achieved induction of clinical remission. In Study UC-II, a greater percentage of the patients treated with 160/80 mg of adalimumab compared to patients treated with placebo achieved sustained clinical remission (clinical remission at both Weeks 8 and 52) (Table 15).

#### Table 15. Induction of Clinical Remission in Studies UC-I and UC-II and

	Study UC-I			Study UC-II			
	Placebo N=130	Adalimumab 160/80 mg N=130	Treatment Difference (95% CI)	Placebo N=246	Adalimumab 160/80 mg N=248	Treatment	
Induction of Clinical Remission (Clinical Remission at Week 8)	9.2%	18.5%	9.3%* (0.9%, 17.6%)	9.3%	16.5%	7.2%* (1.2%, 12.9%)	
Sustained Clinical Remission (Clinical Remission at both Weeks 8 and 52)	Ν/Δ	N/A	N/A	4.1%	8.5%	4.4%* (0.1%, 8.6%)	
CI=Confid	Clinical remission is defined as Mayo score $\leq 2$ with no individual subscores >1. CI=Confidence interval						
at both Weeks 8 and 52) Clinical ren CI=Confid	nission is ence inte		-			scores	

#### Sustained Clinical Remission in Study UC-II (Percent of Patients)

In Study UC-I, there was no statistically significant difference in clinical remission observed between the adalimumab 80/40 mg group and the placebo group at Week 8.

In Study UC-II, 17.3% (43/248) in the adalimumab group were in clinical remission at Week 52 compared to 8.5% (21/246) in the placebo group (treatment difference: 8.8%; 95% confidence interval (CI): [2.8%, 14.5%]; p<0.05).

In the subgroup of patients in Study UC-II with prior TNF-blocker use, the treatment difference for induction of clinical remission appeared to be lower than that seen in the whole study population, and the treatment differences for sustained clinical remission and clinical remission at Week 52 appeared to be similar to those seen in the whole study population. The subgroup of patients with prior TNF-blocker use achieved induction of clinical remission at 9% (9/98) in the adalimumab group versus 7% (7/101) in the placebo group, and sustained clinical remission at 5% (5/98) in the adalimumab group versus 1% (1/101) in the placebo group. In the subgroup of patients with prior TNF-blocker use, 10% (10/98) were in clinical remission at Week 52 in the adalimumab group versus 3% (3/101) in the placebo group.

#### 14.8 Plaque Psoriasis

The safety and efficacy of adalimumab were assessed in randomized, double-blind, placebo-controlled studies in 1696 adult subjects with moderate to severe chronic plaque psoriasis (Ps) who were candidates for systemic therapy or phototherapy.

Study Ps-I evaluated 1212 subjects with chronic Ps with  $\geq$ 10% body surface area (BSA) involvement, Physician's Global Assessment (PGA) of at least moderate disease severity,

and Psoriasis Area and Severity Index (PASI)  $\geq$ 12 within three treatment periods. In period A, subjects received placebo or adalimumab at an initial dose of 80 mg at Week 0 followed by a dose of 40 mg every other week starting at Week 1. After 16 weeks of therapy, subjects who achieved at least a PASI 75 response at Week 16, defined as a PASI score improvement of at least 75% relative to baseline, entered period B and received open-label 40 mg adalimumab every other week. After 17 weeks of open label therapy, subjects who maintained at least a PASI 75 response at Week 33 and were originally randomized to active therapy in period A were re-randomized in period C to receive 40 mg adalimumab every other week or placebo for an additional 19 weeks. Across all treatment groups the mean baseline PASI score was 19 and the baseline Physician's Global Assessment score ranged from "moderate" (53%) to "severe" (41%) to "very severe" (6%).

Study Ps-II evaluated 99 subjects randomized to adalimumab and 48 subjects randomized to placebo with chronic plaque psoriasis with  $\geq 10\%$  BSA involvement and PASI  $\geq 12$ . Subjects received placebo, or an initial dose of 80 mg adalimumab at Week 0 followed by 40 mg every other week starting at Week 1 for 16 weeks. Across all treatment groups the mean baseline PASI score was 21 and the baseline PGA score ranged from "moderate" (41%) to "severe" (51%) to "very severe" (8%).

Studies Ps-I and II evaluated the proportion of subjects who achieved "clear" or "minimal" disease on the 6-point PGA scale and the proportion of subjects who achieved a reduction in PASI score of at least 75% (PASI 75) from baseline at Week 16 (see Table 16 and 17).

Additionally, Study Ps-I evaluated the proportion of subjects who maintained a PGA of "clear" or "minimal" disease or a PASI 75 response after Week 33 and on or before Week 52.

Adalimumab 40 mg every other week	Placebo
N=814	N=398
506 (62%)	17 (4%)
578 (71%)	26 (7%)
	week N=814 506 (62%)

# Table 16. Efficacy Results at 16 Weeks in Study Ps-I Number ofSubjects (%)

\* Clear = no plaque elevation, no scale, plus or minus hyperpigmentation or diffuse pink or red coloration

Minimal = possible but difficult to ascertain whether there is slight elevation of plaque above normal skin, plus or minus surface dryness with some white coloration, plus or minus up to red coloration

### Table 17. Efficacy Results at 16 Weeks in Study Ps-II Number of<br/>Subjects (%)

	Adalimumab 40 mg every other week	Placebo
	N=99	N=48
PGA: Clear or minimal*	70 (71%)	5 (10%)
PASI 75	77 (78%)	9 (19%)

\* Clear = no plaque elevation, no scale, plus or minus hyperpigmentation or diffuse pink or red coloration Minimal = possible but difficult to ascertain whether there is slight elevation of plaque above normal skin, plus or minus surface dryness with some white coloration, plus or minus up to red coloration

Additionally, in Study Ps-I, subjects on adalimumab who maintained a PASI 75 were rerandomized to adalimumab (N=250) or placebo (N=240) at Week 33. After 52 weeks of treatment with adalimumab, more subjects on adalimumab maintained efficacy when compared to subjects who were re-randomized to placebo based on maintenance of PGA of "clear" or "minimal" disease (68% vs. 28%) or a PASI 75 (79% vs. 43%).

A total of 347 stable responders participated in a withdrawal and retreatment evaluation in an open-label extension study. Median time to relapse (decline to PGA "moderate" or worse) was approximately 5 months. During the withdrawal period, no subject experienced transformation to either pustular or erythrodermic psoriasis. A total of 178 subjects who relapsed re-initiated treatment with 80 mg of adalimumab, then 40 mg every other week beginning at week 1. At week 16, 69% (123/178) of subjects had a response of PGA "clear" or "minimal".

A randomized, double-blind study (Study Ps-III) compared the efficacy and safety of adalimumab versus placebo in 217 adult subjects. Subjects in the study had to have chronic plaque psoriasis of at least moderate severity on the PGA scale, fingernail involvement of at least moderate severity on a 5-point Physician's Global Assessment of Fingernail Psoriasis (PGA-F) scale, a Modified Nail Psoriasis Severity Index (mNAPSI) score for the target-fingernail of ≥8, and either a BSA involvement of at least 10% or a BSA involvement of at least 5% with a total mNAPSI score for all fingernails of ≥20. Subjects received an initial dose of 80 mg adalimumab followed by 40 mg every other week (starting one week after the initial dose) or placebo for 26 weeks followed by openlabel adalimumab treatment for an additional 26 weeks. This study evaluated the proportion of subjects who achieved "clear" or "minimal" assessment with at least a 2grade improvement on the PGA-F scale and the proportion of subjects who achieved at least a 75% improvement from baseline in the mNAPSI score (mNAPSI 75) at Week 26.

At Week 26, a higher proportion of subjects in the adalimumab group than in the placebo group achieved the PGA-F endpoint. Furthermore, a higher proportion of subjects in the adalimumab group than in the placebo group achieved mNAPSI 75 at Week 26 (see Table 18).

Endpoint	Adalimumab 40 mg every other week* N=109	Placebo N=108
PGA-F: ≥2-grade improvement and <i>clear</i> or <i>minimal</i>	49%	7%
mNAPSI 75	47%	3%

#### Table 18. Efficacy Results at 26 Weeks

\*Subjects received 80 mg of adalimumab at Week 0, followed by 40 mg every other week starting at Week 1.

Nail pain was also evaluated and improvement in nail pain was observed in Study Ps-III.

#### 14.9 Hidradenitis Suppurativa

Two randomized, double-blind, placebo-controlled studies (Studies HS-I and II) evaluated the safety and efficacy of adalimumab in a total of 633 adult subjects with moderate to severe hidradenitis suppurativa (HS) with Hurley Stage II or III disease and with at least 3 abscesses or inflammatory nodules. In both studies, subjects received placebo or adalimumab at an initial dose of 160 mg at Week 0, 80 mg at Week 2, and 40 mg every week starting at Week 4 and continued through Week 11. Subjects used topical antiseptic wash daily. Concomitant oral antibiotic use was allowed in Study HS-II.

Both studies evaluated Hidradenitis Suppurativa Clinical Response (HiSCR) at Week 12. HiSCR was defined as at least a 50% reduction in total abscess and inflammatory nodule count with no increase in abscess count and no increase in draining fistula count relative to baseline (see Table 19). Reduction in HS-related skin pain was assessed using a Numeric Rating Scale in patients who entered the study with an initial baseline score of 3 or greater on a 11 point scale.

In both studies, a higher proportion of adalimumab- than placebo-treated subjects achieved HiSCR (see Table 19).

	HS	HS Study I		Study II*
	Placebo	Adalimumab 40 mg Weekly	Placebo	Adalimumab 40 mg Weekly
Hidradenitis Suppurativa Clinical Response (HiSCR)	N = 154 40 (26%)	N = 153 64 (42%)	N=163 45 (28%)	N=163 96 (59%)
*19.3% of subjects in S during the study.	tudy HS-II co	ontinued baselin	e oral antibio	otic therapy

## Table 19. Efficacy Results at 12 Weeks in Subjects with Moderate toSevere Hidradenitis Suppurativa

In both studies, from Week 12 to Week 35 (Period B), subjects who had received adalimumab were re-randomized to 1 of 3 treatment groups (adalimumab 40 mg every week, adalimumab 40 mg every other week, or placebo). Subjects who had been randomized to placebo were assigned to receive adalimumab 40 mg every week (Study HS-I) or placebo (Study HS-II).

During Period B, flare of HS, defined as  $\geq 25\%$  increase from baseline in abscesses and inflammatory nodule counts and with a minimum of 2 additional lesions, was documented in 22 (22%) of the 100 subjects who were withdrawn from adalimumab treatment following the primary efficacy timepoint in two studies.

#### 14.10 Adult Uveitis

The safety and efficacy of adalimumab were assessed in adult patients with noninfectious intermediate, posterior and panuveitis excluding patients with isolated anterior uveitis, in two randomized, double-masked, placebo-controlled studies (UV I and II). Patients received placebo or adalimumab at an initial dose of 80 mg followed by 40 mg every other week starting one week after the initial dose. The primary efficacy endpoint in both studies was 'time to treatment failure'.

Treatment failure was a multi-component outcome defined as the development of new inflammatory chorioretinal and/or inflammatory retinal vascular lesions, an increase in anterior chamber (AC) cell grade or vitreous haze (VH) grade or a decrease in best corrected visual acuity (BCVA).

Study UV I evaluated 217 patients with active uveitis while being treated with corticosteroids (oral prednisone at a dose of 10 to 60 mg/day). All patients received a standardized dose of prednisone 60 mg/day at study entry followed by a mandatory taper schedule, with complete corticosteroid discontinuation by Week 15.

Study UV II evaluated 226 patients with inactive uveitis while being treated with corticosteroids (oral prednisone 10 to 35 mg/day) at baseline to control their disease. Patients subsequently underwent a mandatory taper schedule, with complete corticosteroid discontinuation by Week 19.

#### **Clinical Response**

Results from both studies demonstrated statistically significant reduction of the risk of treatment failure in patients treated with adalimumab versus patients receiving placebo. In both studies, all components of the primary endpoint contributed cumulatively to the overall difference between adalimumab and placebo groups (Table 20).

		UV I			UV II	
		Adalimumab (N = 110)	HR [95% CI] <sup>a</sup>	Placebo (N = 111)	Adalimumab (N = 115)	HR [95% CI] <sup>a</sup>
Failure <sup>b</sup> n (%)	84 (78.5)	60 (54.5)	0.50 [0.36, 0.70]	61 (55.0)	45 (39.1)	0.57 [0.39, 0.84]
Median Time to Failure (Months) [95% CI]	3.0 [2.7, 3.7]	5.6 [3.9, 9.2]	N/A	8.3 [4.8, 12.0]	NE <sup>c</sup>	N/A

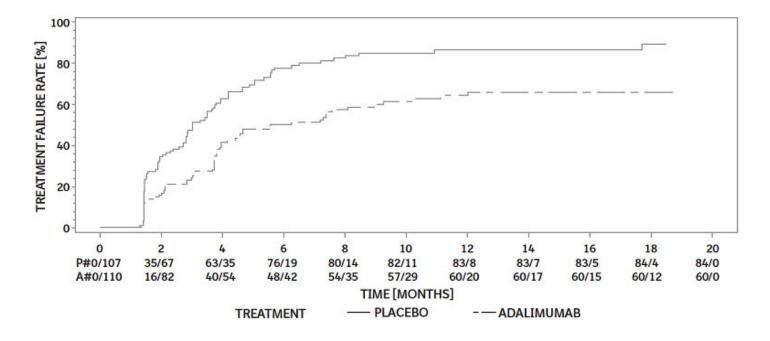
#### Table 20. Time to Treatment Failure in Studies UV I and UV II

<sup>a</sup> HR of adalimumab versus placebo from proportional hazards regression with treatment as factor.

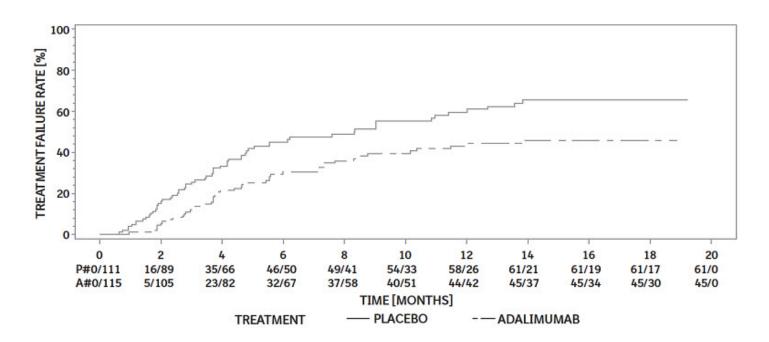
<sup>b</sup> Treatment failure at or after Week 6 in Study UV I, or at or after Week 2 in Study UV II, was counted as event. Subjects who discontinued the study were censored at the time of dropping out.

 $^{c}$  NE = not estimable. Fewer than half of at-risk subjects had an event.

## Figure 3. Kaplan-Meier Curves Summarizing Time to Treatment Failure on or after Week 6 (Study UV I) or Week 2 (Study UV II)







#### Study UV II

Note: P# = Placebo (Number of Events/Number at Risk); A# = Adalimumab (Number of Events/Number at Risk).

#### **15 REFERENCES**

1. National Cancer Institute. Surveillance, Epidemiology, and End Results Database (SEER) Program. SEER Incidence Crude Rates, 17 Registries, 2000-2007.

#### **16 HOW SUPPLIED/STORAGE AND HANDLING**

Adalimumab-adbm injection is supplied as a sterile, preservative-free, clear to slightly opalescent and colorless to slightly yellow solution for subcutaneous administration. The following packaging configurations are available.

Adalimumab-adbm Pen Prefilled Pen	Contents	Number of Units/Carton	NDC number
40 mg/0.8 mL	2 dose trays* and 2 alcohol preps	2	0597-0545-22
40 mg/0.8 mL – Starter Package for Psoriasis or Uveitis	4 dose trays* and 4 alcohol preps	4	0597-0545-44
40 mg/0.8 mL – Starter Package for Crohn's Disease, Ulcerative Colitis or Hidradenitis Suppurativa	6 dose trays* and 8 alcohol preps	6	0597-0545-66
40 mg/0.4 mL	2 dose trays** and 2 alcohol preps	2	0597-0575-50
40 mg/0.4 mL – Starter Package for Psoriasis or Uveitis	4 dose trays** and 4 alcohol preps	4	0597-0575-40
40 mg/0.4 mL – Starter Package for Crohn's Disease, Ulcerative Colitis or Hidradenitis Suppurativa	6 dose trays** and 8 alcohol preps	6	0597-0575-60

\*Each dose tray consists of a single-dose pen, containing a 1 mL prefilled glass syringe with a fixed ½ inch needle, providing 40 mg/0.8 mL of Adalimumabadbm. The needle cap contains natural rubber latex.

\*\*Each dose tray consists of a single-dose pen, containing a 1 mL prefilled glass syringe with a fixed ½ inch needle, providing 40 mg/0.4 mL of Adalimumab-adbm. The needle cap contains natural rubber latex.

Adalimumab-adbm Prefilled Syringe	( ΟΠΤΩΠΤΕΥ	Number of Units/Carton	NDC number
10 mg/0.2 mL	2 dose trays and 2 alcohol preps	2	0597-0585-89
20 mg/0.4 mL	2 dose trays and 2 alcohol preps	2	0597-0555-80
40 mg/0.4 mL	2 dose trays and 2 alcohol preps	2	0597-0565-20
40 mg/0.8 mL	2 dose trays and 2 alcohol preps	2	0597-0595-20

\*Each dose tray consists of a single-dose, 1 mL prefilled glass syringe with a fixed,  $\frac{1}{2}$  inch needle. The needle cap contains natural rubber latex.

#### Storage and Stability

Do not use beyond the expiration date on the container. Adalimumab-adbm must be refrigerated at 36°F to 46°F (2°C to 8°C). DO NOT FREEZE. Do not use if frozen even if it has been thawed.

Store in original carton until time of administration to protect from light.

If needed, for example when traveling, Adalimumab-adbm may be stored at room temperature up to a maximum of 77°F (25°C) for a period of up to 14 days, with protection from light. Adalimumab-adbm should be discarded if not used within the 14-day period. Record the date when Adalimumab-adbm is first removed from the refrigerator in the spaces provided on the carton and dose tray.

Do not store Adalimumab-adbm in extreme heat or cold.

#### **17 PATIENT COUNSELING INFORMATION**

Advise the patient or caregiver to read the FDA-approved patient labeling (Medication Guide and Instructions for Use).

#### **Infections**

Inform patients that Adalimumab-adbm may lower the ability of their immune system to fight infections. Instruct patients of the importance of contacting their doctor if they develop any symptoms of infection, including tuberculosis, invasive fungal infections, and reactivation of hepatitis B virus infections [see Warnings and Precautions (5.1, 5.2, 5.4)].

#### <u>Malignancies</u>

Counsel patients about the risk of malignancies while receiving Adalimumab-adbm [see Warnings and Precautions (5.2)].

#### Hypersensitivity Reactions

Advise patients to seek immediate medical attention if they experience any symptoms of severe hypersensitivity reactions. Advise latex-sensitive patients that the needle cap of the Adalimumab-adbm Pen and prefilled syringe contains natural rubber latex [see Warnings and Precautions (5.3), How Supplied/Storage and Handling (16)].

#### Other Medical Conditions

Advise patients to report any signs of new or worsening medical conditions such as congestive heart failure, neurological disease, autoimmune disorders, or cytopenias. Advise patients to report any symptoms suggestive of a cytopenia such as bruising, bleeding, or persistent fever [see Warnings and Precautions (5.5, 5.6, 5.8, 5.9)].

#### Instructions on Injection Technique

Inform patients that the first injection is to be performed under the supervision of a qualified health care professional. If a patient or caregiver is to administer Adalimumabadbm, instruct them in injection techniques and assess their ability to inject subcutaneously to ensure the proper administration of Adalimumab-adbm *[see Instructions for Use]*. For patients who will use the Adalimumab-adbm Pen, tell them that they:

- Will hear a '**click**' when the injection button is pressed. The click indicates the **start** of the injection.
- Must keep holding the Adalimumab-adbm Pen against their squeezed, raised skin until all of the medicine is injected. This can take up to 10 seconds.
- Confirm entire dose was delivered by making sure plunger (seen in window) reached the bottom of the pen.

Instruct patients to dispose of their used needles and syringes or used pens in an FDAcleared sharps disposal container immediately after use. **Instruct patients not to dispose of loose needles and syringes or pens in their household trash.** Instruct patients that if they do not have an FDA-cleared sharps disposal container, they may use a household container that is made of a heavy-duty plastic, can be closed with a tight-fitting and puncture-resistant lid without sharps being able to come out, upright and stable during use, leak-resistant, and properly labeled to warn of hazardous waste inside the container.

Instruct patients that when their sharps disposal container is almost full, they will need to follow their community guidelines for the correct way to dispose of their sharps disposal container. Instruct patients that there may be state or local laws regarding disposal of used needles and syringes. Refer patients to the FDA's website at http://www.fda.gov/safesharpsdisposal for more information about safe sharps disposal, and for specific information about sharps disposal in the state that they live in.

# Instruct patients not to dispose of their used sharps disposal container in their household trash unless their community guidelines permit this. Instruct patients not to recycle their used sharps disposal container.

Address medical inquiries to: (800) 542-6257.

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#### MEDICATION GUIDE Adalimumab-adbm (ada-LIM-u-mab adbm) injection, for subcutaneous use This product is CYLTEZO® (adalimumab-adbm).

Read the Medication Guide that comes with Adalimumab-adbm before you start taking it and each time you get a refill. There may be new information. This Medication Guide

does not take the place of talking with your doctor about your medical condition or treatment.

#### What is the most important information I should know about Adalimumabadbm?

Adalimumab-adbm is a medicine that affects your immune system. Adalimumab-adbm can lower the ability of your immune system to fight infections. **Serious infections** 

have happened in people taking adalimumab products. These serious infections include tuberculosis (TB) and infections caused by viruses, fungi or bacteria that have spread throughout the body. Some people have died from these infections.

- Your doctor should test you for TB before starting Adalimumab-adbm.
- Your doctor should check you closely for signs and symptoms of TB during treatment with Adalimumab-adbm.

You should not start taking Adalimumab-adbm if you have any kind of infection unless your doctor says it is okay.

#### Before starting Adalimumab-adbm, tell your doctor if you:

- think you have an infection or have symptoms of an infection such as:
  - fever, sweats, or chills
  - muscle aches
  - cough
  - shortness of breath
  - blood in phlegm
  - warm, red or painful skin or sores on your body
- diarrhea or stomach pain
- burning when you urinate or urinate more often than normal
- $\circ~$  feel very tired
- weight loss

- are being treated for an infection.
- get a lot of infections or have infections that keep coming back.
- have diabetes.
- have TB, or have been in close contact with someone with TB.
- were born in, lived in, or traveled to countries where there is more risk for getting TB. Ask your doctor if you are not sure.
- live or have lived in certain parts of the country (such as the Ohio and Mississippi River valleys) where there is an increased risk for getting certain kinds of fungal infections (histoplasmosis, coccidioidomycosis, or blastomycosis). These infections may happen or become more severe if you use Adalimumab-adbm. Ask your doctor if you do not know if you have lived in an area where these infections are common.
- have or have had hepatitis B.
- use the medicine ORENCIA (abatacept), KINERET (anakinra), RITUXAN (rituximab), IMURAN (azathioprine), or PURINETHOL (6-mercaptopurine, 6-MP).
- are scheduled to have major surgery.

After starting Adalimumab-adbm, call your doctor right away if you have an infection, or any sign of an infection.

Adalimumab-adbm can make you more likely to get infections or make any infection that you may have worse.

#### Cancer

• For children and adults taking Tumor Necrosis Factor (TNF)-blockers, including

Adalimumab-adbm, the chances of getting cancer may increase.

- There have been cases of unusual cancers in children, teenagers, and young adults using TNF-blockers.
- People with rheumatoid arthritis (RA), especially more serious RA, may have a higher chance for getting a kind of cancer called lymphoma.
- If you use TNF blockers including Adalimumab-adbm your chance of getting two types of skin cancer may increase (basal cell cancer and squamous cell cancer of the skin). These types of cancer are generally not life-threatening if treated. Tell your doctor if you have a bump or open sore that does not heal.
- Some people receiving TNF blockers including Adalimumab-adbm developed a rare type of cancer called hepatosplenic T-cell lymphoma. This type of cancer often results in death. Most of these people were male teenagers or young men. Also, most people were being treated for Crohn's disease or ulcerative colitis with another medicine called IMURAN (azathioprine) or PURINETHOL (6-mercaptopurine, 6-MP).

#### What is Adalimumab-adbm?

Adalimumab-adbm is a medicine called a Tumor Necrosis Factor (TNF) blocker. Adalimumab-adbm is used:

- To reduce the signs and symptoms of:
  - **moderate to severe RA in adults.** Adalimumab-adbm can be used alone, with methotrexate, or with certain other medicines.
  - moderate to severe polyarticular juvenile idiopathic arthritis (JIA) in children 2 years and older. Adalimumab-adbm can be used alone or with methotrexate.
  - **psoriatic arthritis (PsA) in adults.** Adalimumab-adbm can be used alone or with certain other medicines.
  - ankylosing spondylitis (AS) in adults.
  - moderate to severe hidradenitis suppurativa (HS) in adults.
- To treat moderate to severe Crohn's disease (CD) in adults and children 6 years of age and older.
- To treat moderate to severe ulcerative colitis (UC) in adults. It is not known if adalimumab products are effective in people who stopped responding to or could not tolerate TNF-blocker medicines.
- To treat moderate to severe chronic (lasting a long time) plaque psoriasis (Ps) in adults who have the condition in many areas of their body and who may benefit from taking injections or pills (systemic therapy) or phototherapy (treatment using ultraviolet light alone or with pills).
- To treat non-infectious intermediate, posterior, and panuveitis in adults.

#### What should I tell my doctor before taking Adalimumab-adbm?

Adalimumab-adbm may not be right for you. Before starting Adalimumab-adbm, tell your doctor about all of your medical conditions, including if you:

- have an infection. See "What is the most important information I should know about Adalimumab-adbm?"
- have or have had cancer.
- have any numbress or tingling or have a disease that affects your nervous system such as multiple sclerosis or Guillain-Barré syndrome.
- have or had heart failure.
- have recently received or are scheduled to receive a vaccine. You may receive

vaccines, except for live vaccines while using Adalimumab-adbm. Children should be brought up to date with all vaccines before starting Adalimumab-adbm.

- are allergic to rubber or latex. The needle cap on the Adalimumab-adbm Pen and prefilled syringe contains dry natural rubber or latex. Tell your doctor if you have any allergies to rubber or latex.
- are allergic to Adalimumab-adbm or to any of its ingredients. See the end of this Medication Guide for a list of ingredients in Adalimumab-adbm.
- are pregnant or plan to become pregnant, breastfeeding or plan to breastfeed. You and your doctor should decide if you should take Adalimumab-adbm while you are pregnant or breastfeeding.
- have a baby and you were using Adalimumab-adbm during your pregnancy. Tell your baby's doctor before your baby receives any vaccines.

**Tell your doctor about all the medicines you take,** including prescription and over-the-counter medicines, vitamins, and herbal supplements.

#### Especially tell your doctor if you use:

- ORENCIA (abatacept), KINERET (anakinra), REMICADE (infliximab), ENBREL (etanercept), CIMZIA (certolizumab pegol) or SIMPONI (golimumab), because you should not use Adalimumab-adbm while you are also using one of these medicines.
- RITUXAN (rituximab). Your doctor may not want to give you Adalimumab-adbm if you have received RITUXAN (rituximab) recently.
- IMURAN (azathioprine) or PURINETHOL (6-mercaptopurine, 6-MP).

# Keep a list of your medicines with you to show your doctor and pharmacist each time you get a new medicine.

#### How should I take Adalimumab-adbm?

- Adalimumab-adbm is given by an injection under the skin. Your doctor will tell you how often to take an injection of Adalimumab-adbm. This is based on your condition to be treated. **Do not inject Adalimumab-adbm more often than you were prescribed.**
- See the **Instructions for Use** inside the carton for complete instructions for the right way to prepare and inject Adalimumab-adbm.
- Make sure you have been shown how to inject Adalimumab-adbm before you do it yourself. You can call your doctor or 1-800-542-6257 if you have any questions about giving yourself an injection. Someone you know can also help you with your injection after they have been shown how to prepare and inject Adalimumab-adbm.
- **Do not** try to inject Adalimumab-adbm yourself until you have been shown the right way to give the injections. If your doctor decides that you or a caregiver may be able to give your injections of Adalimumab-adbm at home, you should receive training on the right way to prepare and inject Adalimumab-adbm.
- Do not miss any doses of Adalimumab-adbm unless your doctor says it is okay. If you forget to take Adalimumab-adbm, inject a dose as soon as you remember. Then, take your next dose at your regular scheduled time. This will put you back on schedule. In case you are not sure when to inject Adalimumab-adbm, call your doctor or pharmacist.
- If you take more Adalimumab-adbm than you were told to take, call your doctor.

#### What are the possible side effects of Adalimumab-adbm?

Adalimumab-adbm can cause serious side effects, including:

#### See "What is the most important information I should know about Adalimumab-adbm?"

- Serious Infections. Your doctor will examine you for TB and perform a test to see if you have TB. If your doctor feels that you are at risk for TB, you may be treated with medicine for TB before you begin treatment with Adalimumab-adbm and during treatment with Adalimumab-adbm. Even if your TB test is negative your doctor should carefully monitor you for TB infections while you are taking Adalimumabadbm. People who had a negative TB skin test before receiving adalimumab products have developed active TB. Tell your doctor if you have any of the following symptoms while taking or after taking Adalimumab-adbm:
  - cough that does not go away
     weight loss

• low grade fever

- loss of body fat and muscle (wasting)
- Hepatitis B infection in people who carry the virus in their blood. If you are a carrier of the hepatitis B virus (a virus that affects the liver), the virus can become active while you use Adalimumab-adbm. Your doctor should do blood tests before you start treatment, while you are using Adalimumab-adbm, and for several months after you stop treatment with Adalimumab-adbm. Tell your doctor if you have any of the following symptoms of a possible hepatitis B infection:
  - muscle aches
  - feel very tired
  - dark urine
  - skin or eyes look yellow
  - little or no appetite

• trouble breathing

- clay-colored bowel movements
- fever
- chills
- stomach discomfort
- skin rash

- vomiting
- Allergic reactions. Allergic reactions can happen in people who use Adalimumabadbm. Call your doctor or get medical help right away if you have any of these symptoms of a serious allergic reaction:
  - hives

- swelling of your face, eyes, lips or mouth
- **Nervous system problems.** Signs and symptoms of a nervous system problem include: numbness or tingling, problems with your vision, weakness in your arms or legs, and dizziness.
- **Blood problems.** Your body may not make enough of the blood cells that help fight infections or help to stop bleeding. Symptoms include a fever that does not go away, bruising or bleeding very easily, or looking very pale.
- New heart failure or worsening of heart failure you already have. Call your doctor right away if you get new worsening symptoms of heart failure while taking Adalimumab-adbm, including:
  - shortness of breath

swelling of your ankles or feet

- sudden weight gain
- **Immune reactions including a lupus-like syndrome.** Symptoms include chest

discomfort or pain that does not go away, shortness of breath, joint pain, or a rash on your cheeks or arms that gets worse in the sun. Symptoms may improve when you stop Adalimumab-adbm.

- **Liver problems.** Liver problems can happen in people who use TNF-blocker medicines. These problems can lead to liver failure and death. Call your doctor right away if you have any of these symptoms:
  - feel very tired
  - poor appetite or vomiting

- $\circ~$  skin or eyes look yellow
- pain on the right side of your stomach (abdomen)
- **Psoriasis.** Some people using adalimumab products had new psoriasis or worsening of psoriasis they already had. Tell your doctor if you develop red scaly patches or raised bumps that are filled with pus. Your doctor may decide to stop your treatment with Adalimumab-adbm.

# Call your doctor or get medical care right away if you develop any of the above symptoms. Your treatment with Adalimumab-adbm may be stopped. The most common side effects of Adalimumab-adbm include:

- injection site reactions: redness, rash, swelling, itching, or bruising. These symptoms usually will go away within a few days. Call your doctor right away if you have pain, redness or swelling around the injection site that does not go away within a few days or gets worse.
- upper respiratory infections (including sinus infections).
- headaches.
- rash.

These are not all the possible side effects with Adalimumab-adbm. Tell your doctor if you have any side effect that bothers you or that does not go away. Ask your doctor or pharmacist for more information.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

#### How should I store Adalimumab-adbm?

- Store Adalimumab-adbm in the refrigerator at 36°F to 46°F (2°C to 8°C). Store Adalimumab-adbm in the original carton until use to protect it from light.
- **Do not freeze Adalimumab-adbm.** Do not use Adalimumab-adbm if frozen, even if it has been thawed.
- Refrigerated Adalimumab-adbm may be used until the expiration date printed on the Adalimumab-adbm carton, dose tray, pen, or prefilled syringe. Do not use Adalimumab-adbm after the expiration date.
- If needed, for example when you are traveling, you may also store Adalimumabadbm at room temperature up to 77°F (25°C) for up to 14 days. Store Adalimumabadbm in the original carton until use to protect it from light.
- Throw away Adalimumab-adbm if it has been kept at room temperature and not been used within 14 days.
- Record the date you first remove Adalimumab-adbm from the refrigerator in the spaces provided on the carton and dose tray.
- Do not store Adalimumab-adbm in extreme heat or cold.
- Do not use a pen or prefilled syringe if the liquid is milky, discolored, or has flakes or

particles in it.

• Do not drop or crush Adalimumab-adbm. The prefilled syringe is glass.

# Keep Adalimumab-adbm, injection supplies, and all other medicines out of the reach of children.

#### General information about the safe and effective use of Adalimumab-adbm.

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use Adalimumab-adbm for a condition for which it was not prescribed. Do not give Adalimumab-adbm to other people, even if they have the same condition. It may harm them.

This Medication Guide summarizes the most important information about Adalimumabadbm. If you would like more information, talk with your doctor. You can ask your pharmacist or doctor for information about Adalimumab-adbm that is written for health professionals. For more information, call 1-800-542-6257.

#### What are the ingredients in Adalimumab-adbm?

Active ingredient: adalimumab-adbm

Adalimumab-adbm Pen 40 mg/0.8 mL, Adalimumab-adbm 40 mg/0.8 mL prefilled syringe, Adalimumab-adbm Pen 40 mg/0.4 mL, Adalimumab-adbm 40 mg/0.4 mL prefilled syringe, Adalimumab-adbm 20 mg/0.4 mL prefilled syringe, and Adalimumabadbm 10 mg/0.2 mL prefilled syringe:

**Inactive ingredients:** glacial acetic acid, polysorbate 80, sodium acetate trihydrate, trehalose dihydrate, and Water for Injection.

Manufactured by: Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT 06877 USA US License Number 2006

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For more information about Adalimumab-adbm, scan the code or call 1-800-542-6257.



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This Medication Guide has been approved by the U.S. Food and Drug Administration. Revised: 04/2024

#### **INSTRUCTIONS FOR USE**

#### Adalimumab-adbm (ada-LIM-u-mab adbm) Pen injection, for subcutaneous use This product is CYLTEZO® (adalimumab-adbm).

The Adalimumab-adbm Pen is a single-dose prefilled pen that delivers a fixed dose of medicine. The Adalimumab-adbm Pen cannot be reused.



**Important:** Read these instructions before using a Adalimumab-adbm Pen.

- **Do not** use a Adalimumab-adbm Pen until you have been shown the right way to give the injections and have read and understood this Instructions for Use. If your doctor decides that you or a caregiver may be able to give your injections of Adalimumab-adbm at home, you should receive training on the right way to prepare and inject Adalimumab-adbm. To help you remember when to inject Adalimumab-adbm, you can mark your calendar ahead of time.
- **Do not** remove the cap until you are ready to inject.

#### How should I store Adalimumab-adbm?

- Store Adalimumab-adbm in the refrigerator at 36°F to 46°F (2°C to 8°C). Store Adalimumab-adbm in the original carton until use to protect it from light.
- **Do not freeze Adalimumab-adbm.** Do not use Adalimumab-adbm if frozen, even if it has been thawed.
- Refrigerated Adalimumab-adbm may be used until the expiration date printed on the Adalimumab-adbm carton, dose tray, or pen. Do not use Adalimumab-adbm after the expiration date.
- If needed, for example, when you are traveling, you may also store Adalimumabadbm at room temperature up to 77°F (25°C) for up to 14 days. Store Adalimumabadbm in the original carton until use to protect it from light.
- Throw away Adalimumab-adbm if it has been kept at room temperature and not been used within 14 days.
- Record the date you first remove Adalimumab-adbm from the refrigerator in the spaces provided on the carton and dose tray.
- Do not store Adalimumab-adbm in extreme heat or cold.
- Do not use a Adalimumab-adbm Pen if the liquid is milky, discolored, or has flakes or particles in it.
- Do not drop or crush Adalimumab-adbm. The prefilled syringe inside the pen is glass.

### Keep Adalimumab-adbm, injection supplies, and all other medicines out of the reach of children.

Step 1	Gather your supplies
a. b. 500 c. d. 500 c.	<ul> <li>Gather your supplies</li> <li>Gather your supplies and place them on a clean, flat surface: <ul> <li>(a) 1 Adalimumab-adbm Pen, removed from the refrigerator.</li> <li>(b) FDA-cleared sharps disposal container (not included). See "How should I throw away (dispose of) the used pen?"</li> <li>(c) Cotton ball or gauze (not included)</li> <li>(d) 1 Alcohol wipe</li> </ul> </li> <li>Take your Adalimumab-adbm Pen out of the refrigerator 15 to 30 minutes before injecting to allow the medicine to reach room temperature. Injecting medicine that is cold can cause discomfort. Make sure you have all of the supplies you need to give yourself an injection. If any parts of the Adalimumab-adbm pen appear to be missing, broken, or damaged, call your pharmacist.</li> </ul>
Step 2	Inspect the pen
Medicine EXP YYYY-MMM	<ul> <li>Make sure the medicine in the Adalimumab-adbm Pen is clear to slightly cloudy and colorless to slightly yellow.</li> <li>It is normal to see 1 or more bubbles in the medicine.</li> <li><b>Do not</b> use the Adalimumab-adbm Pen if: <ul> <li>The expiration date on the pen has passed.</li> <li>The medicine is milky, discolored, or has flakes or particles in it.</li> <li>The pen has been frozen.</li> <li>Any part of the pen appears cracked, broken or is leaking.</li> <li>The pen has been dropped.</li> <li>The pen has been exposed to extreme heat or left in direct light.</li> </ul> </li> </ul>
Step 3	Wash your hands
	• Wash your hands with soap and water, and dry them well.
Step 4	Choose the injection site

(Injection) sites Abdomen Thighs	<ul> <li>Choose an area on your: <ul> <li>Upper thighs or</li> <li>Abdomen (belly), except for an area 2 inches around your belly button (navel).</li> </ul> </li> <li>Choose a different site each time you inject, at least 1 inch away from the previous injection site.</li> <li>Do not inject into areas that are tender, bruised, red, hard, or scarred.</li> <li>Do not inject through clothes.</li> </ul>
Step 5	Clean the injection site
	<ul> <li>Use an alcohol wipe to clean the injection site.</li> <li>Do not touch this area again before injecting. Allow the skin to dry. Do not fan or blow on the clean area.</li> </ul>
Step 6	Remove the cap
	<ul> <li>Hold the pen with 1 hand. With the other hand gently remove the cap by pulling it straight off the pen. <b>Do not</b> twist the cap. Twisting the cap could damage the needle.</li> <li>Throw away (discard) the cap into an FDA-cleared sharps disposal container. See "How should I throw away (dispose of) the used pen?"</li> <li>Do not try to recap the pen.</li> </ul>
Step 7	Squeeze the skin
Squeeze around injection site	<ul> <li>Gently squeeze the area of cleaned skin around your injection site and hold it firmly. You will inject into this squeezed skin.</li> </ul>

Step 8	Important: Before injecting Adalimumab- adbm, read Step 8 through Step 10 to learn how to use or give (administer) a dose of Adalimumab-adbm the right way. Prepare to administer the dose
Press and hold 90° Tip	<ul> <li>Hold the pen straight at a 90-degree angle to the injection site. Do not cover the window with your hand.</li> <li>Press and hold the tip firmly against the squeezed skin at the injection site. The injection button will unlock and be ready for use.</li> </ul>
Step 9	Administer the dose
Press injection button Keep holding the pen against the squeezed skin and slowly count to 10	<ul> <li>Administer the entire dose: <ul> <li>Press the injection button 1 time. You will hear a 'click' when you press the injection button. The click means the start of the injection.</li> <li>Keep holding the pen against the squeezed skin around the injection site while you slowly count to 10.</li> <li>Do not move the pen during the injection.</li> </ul> </li> <li>Before removing the pen from your skin, look in the window and make sure the plunger is at the bottom of the pen. This means that the entire dose was delivered. If the plunger does not reach the bottom of the pen, call your doctor.</li> </ul>
Step 10	Remove the pen
	<ul> <li>Lift the pen straight up from the skin. The needle guard on the tip will automatically move down to cover the needle.</li> <li>If there is blood, press a cotton ball or gauze on the injection site.</li> <li>Do not rub the injection site.</li> </ul>



Step 11

### How should I throw away (dispose of) the used pen?

Put the used pen in an FDA-cleared sharps disposal container right away after use. **Do not** throw away (dispose of) the pen in the household trash. If you do not have an FDA-cleared sharps disposal container, you may use a household container that is:

- made of a heavy-duty plastic,
- can be closed with a tight fitting, punctureresistant lid, without sharps being able to come out,
- upright and stable during use,
- leak-resistant, and
- properly labeled to warn of hazardous waste inside the container.

When your sharps disposal container is almost full, you will need to follow your community guidelines for the right way to dispose of your sharps disposal container. There may be state or local laws about how you should throw away used needles and syringes. For more information about safe sharps disposal, and for specific information about sharps disposal in the state that you live in, go to the FDA's website at: http://www.fda.gov/safesharpsdisposal.

- **Do not** reuse the Adalimumab-adbm Pen.
- **Do not** throw away (dispose of) your used sharps disposal container in your household trash unless your community guidelines permit this.
- **Do not** recycle your used sharps disposal container.

**Important:** Always keep the sharps disposal container out of the reach of children.

If you have any problems with your injection, do not use another Adalimumab-adbm Pen. Call your doctor for help.

For more information call 1-800-542-6257.

This Instructions for Use has been approved by the U.S. Food and Drug Administration.

Manufactured by: Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT 06877 USA

US License Number 2006

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For more information about Adalimumab-adbm, scan the code or call 1-800-542-6257.

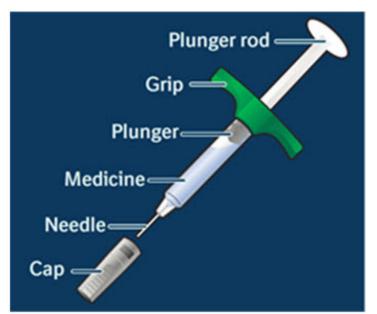


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INSTRUCTIONS FOR USE Adalimumab-adbm (ada-LIM-u-mab adbm) injection, for subcutaneous use Single-Dose Adalimumab-adbm Prefilled Syringe This product is CYLTEZO<sup>®</sup> (adalimumab-adbm).

Adalimumab-adbm is a single-dose prefilled syringe that delivers a fixed dose of medicine. The prefilled syringe cannot be reused.



**Important:** Read these instructions before using a Adalimumab-adbm prefilled syringe.

• **Do not** use a Adalimumab-adbm prefilled syringe until you have been shown the right way to give the injections and have read and understood this Instructions for Use. If your doctor decides that you or a caregiver may be able to give your

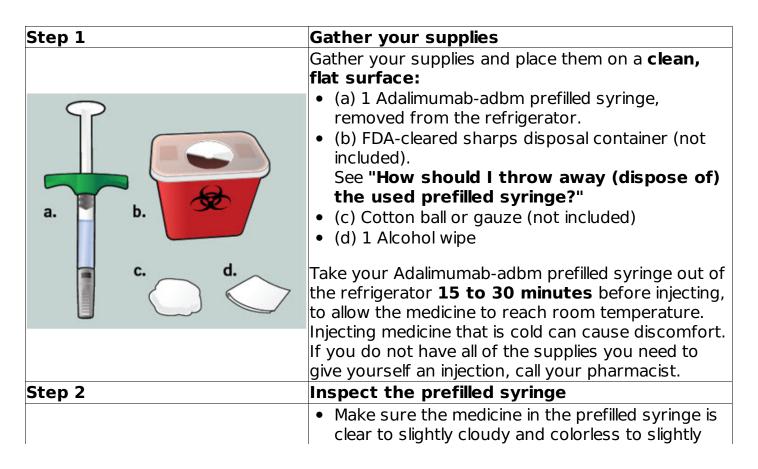
injections at home, you should receive training on the right way to prepare and give the injection. To help you remember when to inject Adalimumab-adbm, you can mark your calendar ahead of time.

• **Do not** remove the cap until you are ready to inject.

#### How should I store Adalimumab-adbm?

- Store Adalimumab-adbm in the refrigerator at 36°F to 46°F (2°C to 8°C). Store Adalimumab-adbm in the original carton until use to protect it from light.
- **Do not freeze Adalimumab-adbm.** Do not use Adalimumab-adbm if frozen, even if it has been thawed.
- Refrigerated Adalimumab-adbm may be used until the expiration date printed on the Adalimumab-adbm carton, dose tray, or prefilled syringe. Do not use Adalimumab-adbm after the expiration date.
- If needed, for example, when you are traveling, you may also store Adalimumabadbm at room temperature up to 77°F (25°C) for up to 14 days. Store Adalimumabadbm in the original carton until use to protect it from light.
- Throw away Adalimumab-adbm if it has been kept at room temperature and not been used within 14 days.
- Record the date you first remove Adalimumab-adbm from the refrigerator in the spaces provided on the carton and dose tray.
- Do not store Adalimumab-adbm in extreme heat or cold.
- Do not use a prefilled syringe if the liquid is milky, discolored, or has flakes or particles in it.
- Do not drop or crush Adalimumab-adbm. The prefilled syringe is glass.

## Keep Adalimumab-adbm, injection supplies, and all other medicines out of the reach of children.



Medicine Expiration VYYY-MMM	<ul> <li>yellow.</li> <li>It is normal to see air bubbles. The air bubbles do not need to be removed prior to injection.</li> <li>Do not use the prefilled syringe if: <ul> <li>The expiration date on the prefilled syringe has passed.</li> <li>The medicine is milky, discolored, or has flakes or particles in it.</li> <li>The prefilled syringe has been frozen.</li> <li>Any part of the prefilled syringe appears cracked, broken or is leaking.</li> <li>The prefilled syringe has been exposed to extreme heat or left in direct light.</li> </ul> </li> </ul>
Step 3	Wash your hands
	• Wash your hands with soap and water, and dry them well.
Step 4	Choose the injection site
(Injection) sites Abdomen Thighs	<ul> <li>Choose an area on your: <ul> <li>Upper thighs or</li> <li>Abdomen (belly), except for an area 2 inches around your belly button (navel).</li> </ul> </li> <li>Choose a different site each time you inject at least 1 inch away from the previous injection site.</li> <li>Do not inject into areas that are tender, bruised, red, hard, or scarred.</li> <li>Do not inject through clothes.</li> </ul>
Step 5	Clean the injection site

	<ul> <li>Use an alcohol wipe to clean the injection site.</li> <li>Do not touch this area again before injecting. Allow the skin to dry. Do not fan or blow on the clean area.</li> </ul>
Step 6	Remove the cap
	<ul> <li>Hold the prefilled syringe with 1 hand. With the other hand gently remove the cap by pulling it straight off. <b>Do not</b> touch the needle or let the needle touch anything.</li> <li>Throw away (discard) the cap into an FDA-cleared sharps disposal container. See "How should I throw away (dispose of) the used prefilled syringe?"</li> <li>Do not try to recap the needle.</li> </ul>
Step 7	Squeeze the skin
Step 7 Squeeze around injection site and hold	<ul> <li>Gently squeeze the area of cleaned skin around your injection site and hold it firmly. You will inject into this squeezed skin.</li> </ul>
Squeeze around	<ul> <li>Gently squeeze the area of cleaned skin around your injection site and hold it firmly. You will inject</li> </ul>
Squeeze around injection site and hold	<ul> <li>Gently squeeze the area of cleaned skin around your injection site and hold it firmly. You will inject into this squeezed skin.</li> </ul>

Slowly push plunger rod	<ul> <li>Using your thumb, slowly push the plunger rod all the way down until plunger reaches the bottom.</li> </ul>
Step 10	Remove the needle from the skin
Remove needle 45°	<ul> <li>Remove the needle from your skin at the same angle as it was inserted.</li> <li>Do not touch the needle.</li> <li>If there is blood, press a cotton ball or gauze on your injection site.</li> <li>Do not rub the injection site.</li> </ul>
Step 11	How should I throw away (dispose of) the used prefilled syringe?
	<ul> <li>Put the used prefilled syringe in an FDA-cleared sharps disposal container right away after use. Do not throw away (dispose of) the prefilled syringe in the household trash.</li> <li>If you do not have an FDA-cleared sharps disposal container, you may use a household container that is:</li> <li>made of a heavy-duty plastic,</li> <li>can be closed with a tight fitting, puncture-resistant lid, without sharps being able to come out,</li> <li>upright and stable during use,</li> <li>leak-resistant. and</li> </ul>

	<ul> <li>properly labeled to warn of hazardous waste inside the container.</li> </ul>
	When your sharps disposal container is almost full, you will need to follow your community guidelines for the right way to dispose of your sharps disposal container. There may be state or local laws about how you should throw away used needles and syringes. For more information about safe sharps disposal, and for specific information about sharps
	disposal in the state that you live in, go to the FDA's website at: http://www.fda.gov/safesharpsdisposal.
	<ul> <li>Do not reuse the prefilled syringe.</li> <li>Do not throw away (dispose of) your used sharps disposal container in your household trash unless your community guidelines permit this.</li> </ul>
	• <b>Do not</b> recycle your used sharps disposal container.
	<b>Important:</b> Always keep the sharps disposal container out of the reach of children.
	If you have any problems with your injection, do not use another Adalimumab-adbm prefilled syringe. Call your doctor for help.
	For more information call 1-800-542-6257.

This Instructions for Use has been approved by the U.S. Food and Drug Administration.

Manufactured by: Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT 06877 USA

US License Number 2006

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For more information about Adalimumab-adbm, scan the code or call 1-800-542-6257.



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#### PRINCIPAL DISPLAY PANEL - 40 mg/0.8 mL Kit Carton

NDC 0597-0595-20

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide.

The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Syringe Contains Dry Natural Rubber.

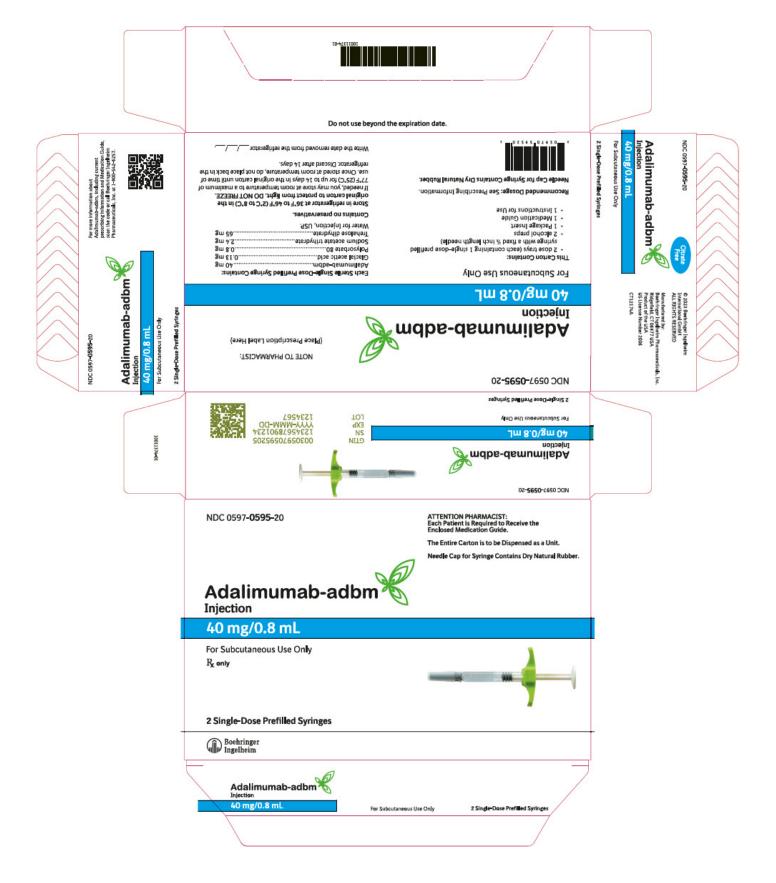
Adalimumab-adbm Injection

40 mg/0.8 mL

For Subcutaneous Use Only

Rx only

2 Single-Dose Prefilled Syringes



#### PRINCIPAL DISPLAY PANEL - 20 mg/0.4 mL Kit Carton

NDC 0597-0555-80

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide. The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Syringe Contains Dry Natural Rubber.

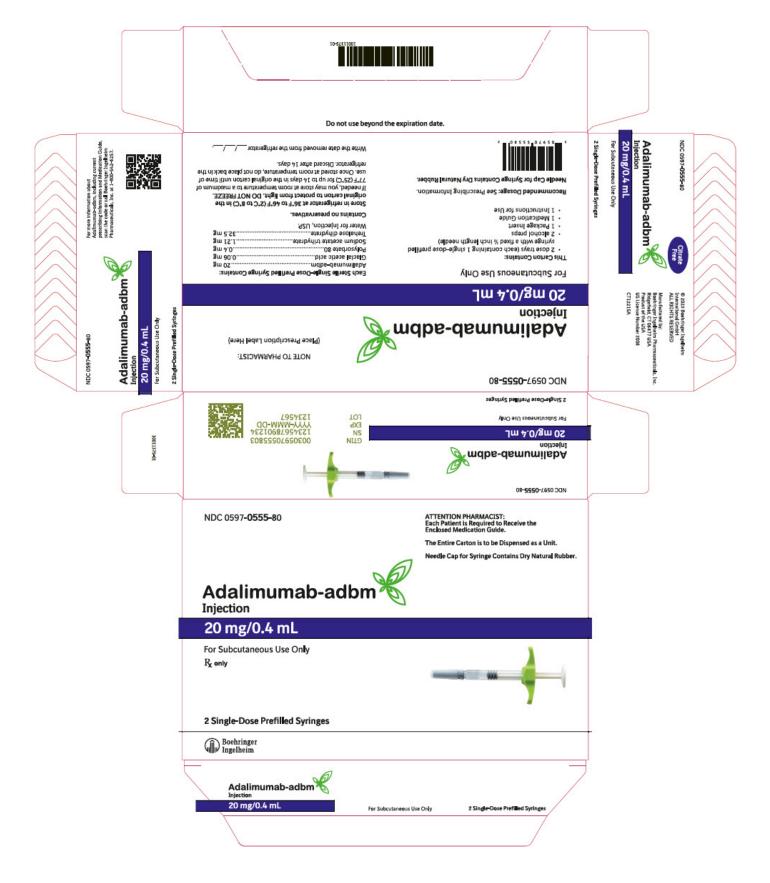
Adalimumab-adbm Injection

20 mg/0.4 mL

For Subcutaneous Use Only

Rx only

2 Single-Dose Prefilled Syringes



#### PRINCIPAL DISPLAY PANEL - 10 mg/0.2 mL Kit Carton

NDC 0597-0585-89

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide. The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Syringe Contains Dry Natural Rubber.

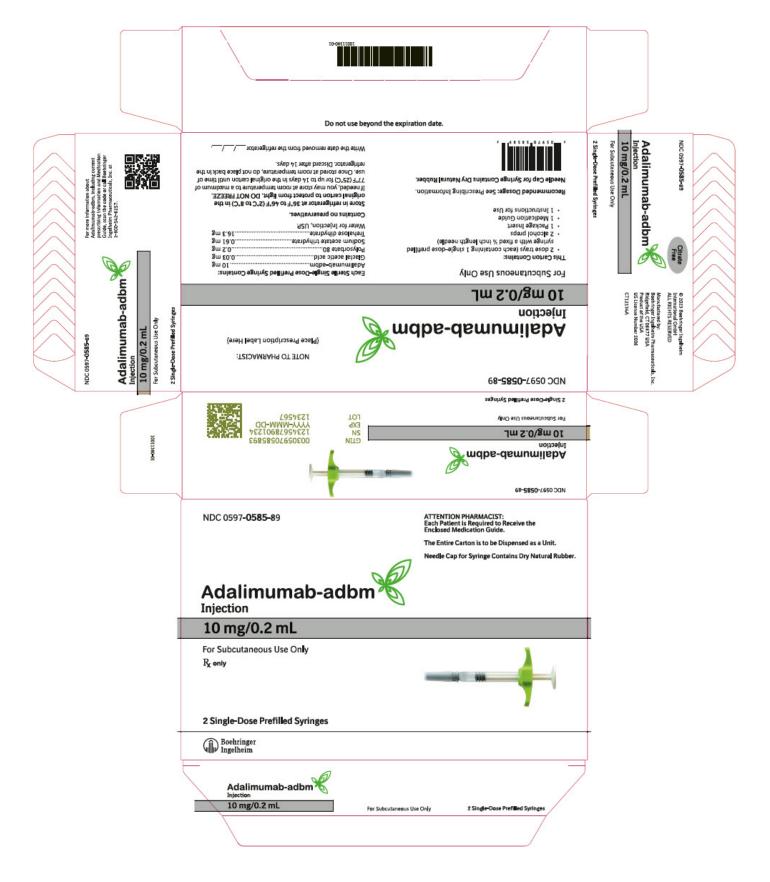
Adalimumab-adbm Injection

10 mg/0.2 mL

For Subcutaneous Use Only

Rx only

2 Single-Dose Prefilled Syringes



#### PRINCIPAL DISPLAY PANEL - 40 mg/0.8 mL Kit Carton

NDC 0597-0545-22

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide. The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Pen Contains Dry Natural Rubber.

Adalimumab-adbm PEN Injection

40 mg/0.8 mL

For Subcutaneous Use Only

Rx only

2 Single-Dose Prefilled Pens

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PRINCIPAL DISPLAY PANEL - 40 mg/0.8 mL Kit Carton - NDC 0597-0545-44

NDC 0597-0545-44

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide.

The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Pen Contains Dry Natural Rubber.

Adalimumab-adbm PEN Injection

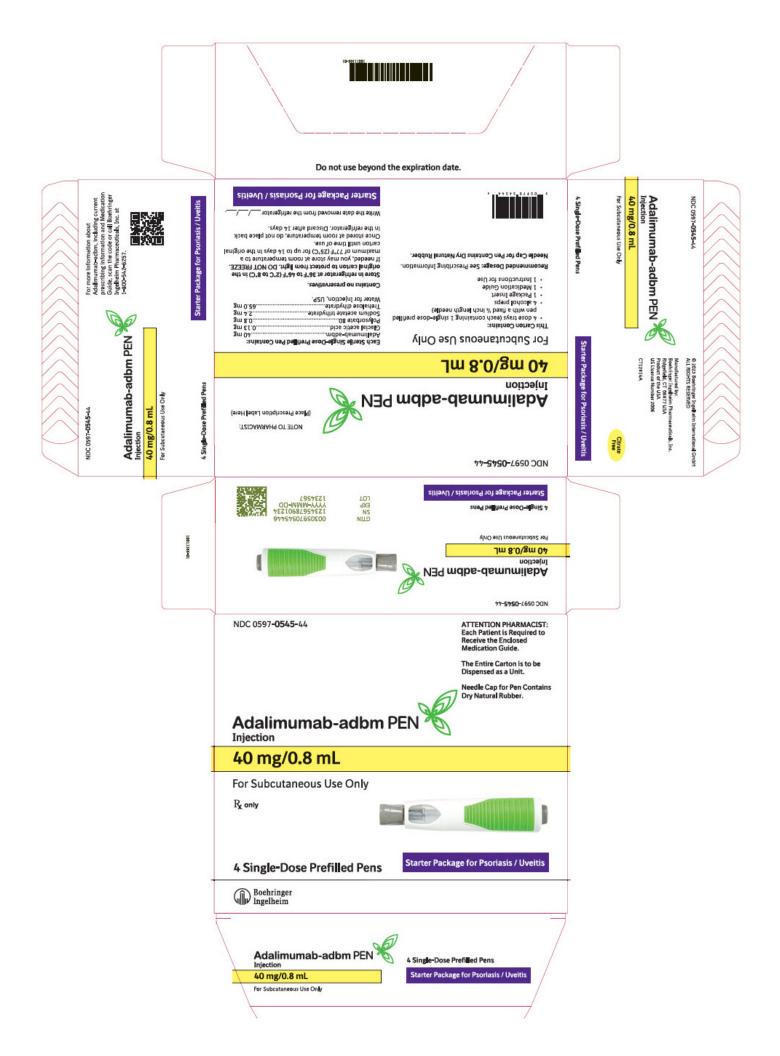
40 mg/0.8 mL

For Subcutaneous Use Only

Rx only

4 Single-Dose Prefilled Pens

Starter Package for Psoriasis / Uveitis



#### PRINCIPAL DISPLAY PANEL - 40 mg/0.8 mL Kit Carton - NDC 0597-0545-66

NDC 0597-0545-66

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide.

The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Pen Contains Dry Natural Rubber.

Adalimumab-adbm PEN Injection

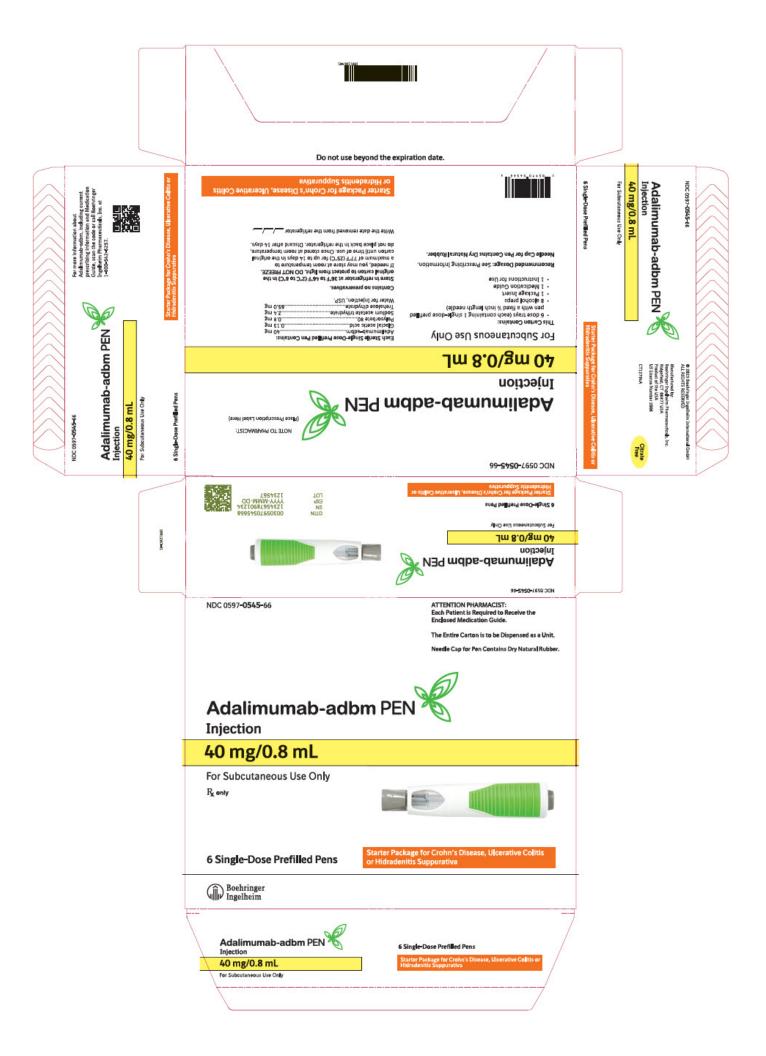
40 mg/0.8 mL

For Subcutaneous Use Only

Rx only

6 Single-Dose Prefilled Pens

Starter Package for Crohn's Disease, Ulcerative Colitis or Hidradenitis Suppurativa



#### PRINCIPAL DISPLAY PANEL - 40 mg/0.4 mL Kit Carton - NDC 0597-0575-40

NDC 0597-0575-40

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide.

The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Pen Contains Dry Natural Rubber.

Adalimumab-adbm PEN Injection

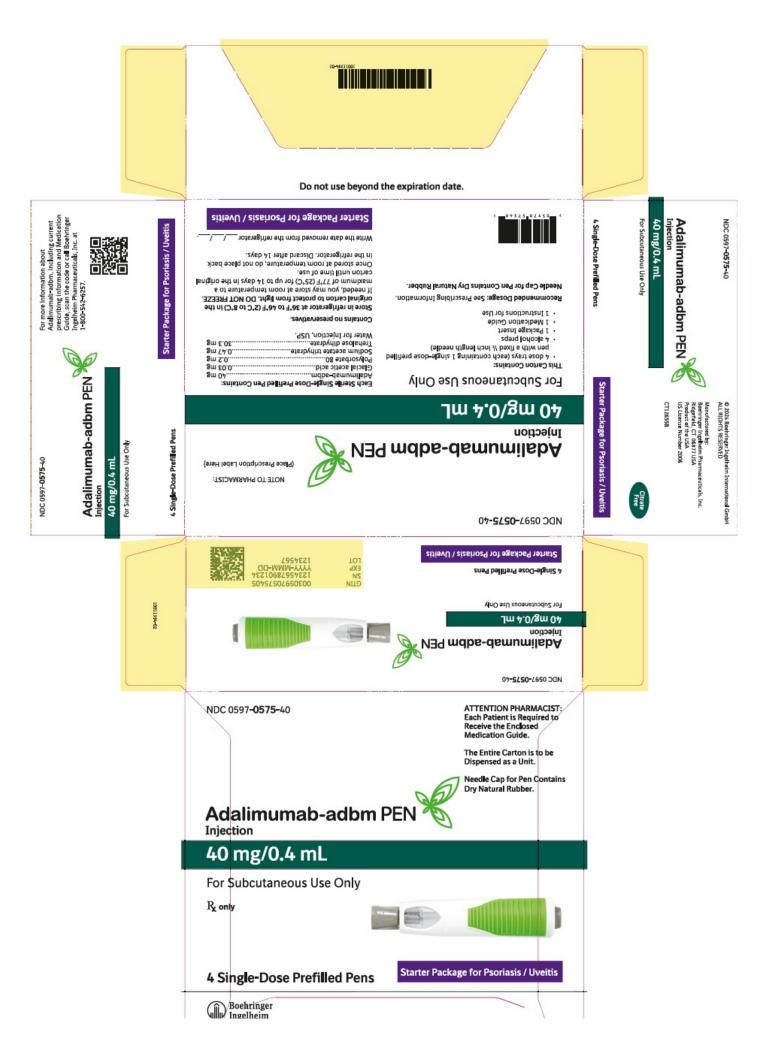
40 mg/0.4 mL

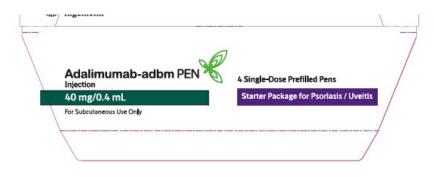
For Subcutaneous Use Only

Rx only

4 Single-Dose Prefilled Pens

Starter Package for Psoriasis / Uveitis





## PRINCIPAL DISPLAY PANEL - 40 mg/0.4 mL Kit Carton - NDC 0597-0575-50

NDC 0597-0575-50

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide.

The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Pen Contains Dry Natural Rubber.

Adalimumab-adbm PEN Injection

40 mg/0.4 mL

For Subcutaneous Use Only

Rx only

2 Single-Dose Prefilled Pens



#### PRINCIPAL DISPLAY PANEL - 40 mg/0.4 mL Kit Carton - NDC 0597-0575-60

NDC 0597-0575-60

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide.

The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Pen Contains Dry Natural Rubber.

Adalimumab-adbm PEN Injection

40 mg/0.4 mL

For Subcutaneous Use Only

Rx only

6 Single-Dose Prefilled Pens

Starter Package for Crohn's Disease, Ulcerative Colitis or Hidradenitis Suppurativa





## PRINCIPAL DISPLAY PANEL - 40 mg/0.4 mL Kit Carton - NDC 0597-0565-20

NDC 0597-0565-20

ATTENTION PHARMACIST: Each Patient is Required to Receive the Enclosed Medication Guide.

The Entire Carton is to be Dispensed as a Unit.

Needle Cap for Syringe Contains Dry Natural Rubber.

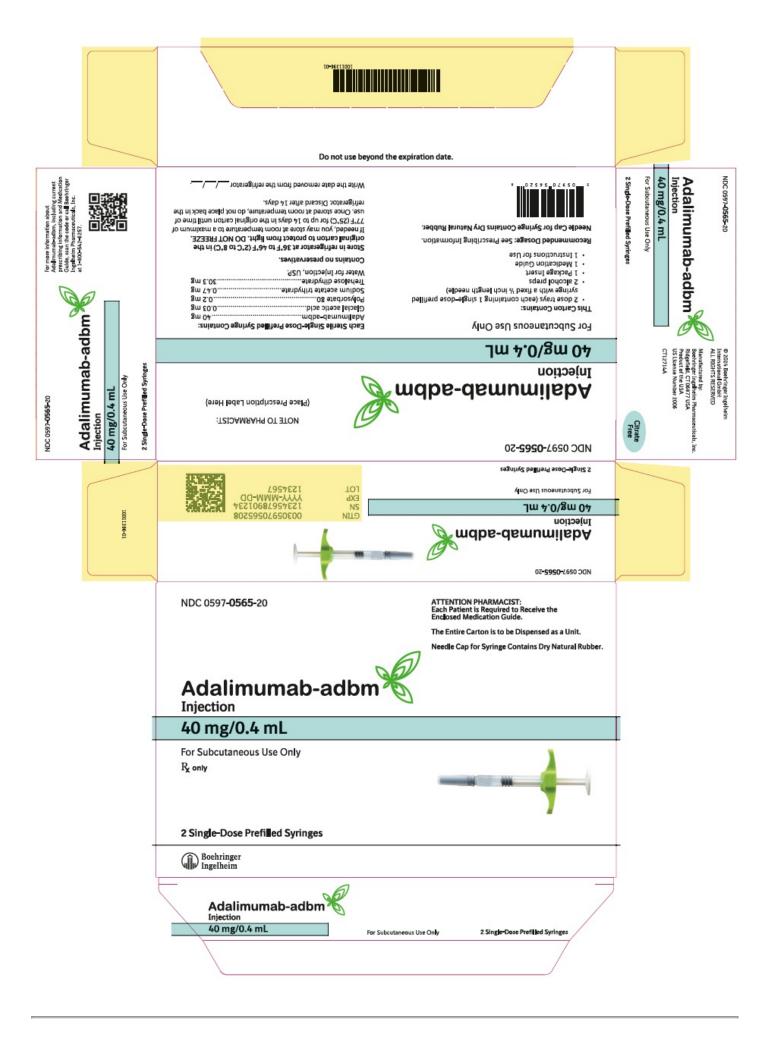
Adalimumab-adbm Injection

40 mg/0.4 mL

For Subcutaneous Use Only

Rx only

2 Single-Dose Prefilled Syringes



	nforma	tion					
Product Typ	be	human pr	ESCRIPTION DRUG	Item Coo	de (Source)	Ν	DC:0597-0595
Dackaging							
Packaging # Item (	•	Dacka	a Description	Markating C	tart Data	Marka	ting End Date
L NDC:0597-0		2 in 1 CA	<b>ge Description</b>	Marketing S 10/01/2023	Start Date	магке	ting End Date
. NDC.0597-0	555-20	1 in 1 KIT		10/01/2025			
Quantity o	of Parts	5					
art #			Quantity		Total Produ	uct Quan	tity
Part 1 1 SY				0.8 mL			
Part 2 1 PAG	CKET			1 mL			
Part 1 o	f 2						
			М				
	-						
adalimumb-	adom inj	lection. s					
Product II	nforma						
			NDC:0597-0590				
ltem Code (	Source)	tion					
ltem Code (	Source)	tion	NDC:0597-0590				
tem Code ( Route of Ad	(Source) Iministra	<b>tion</b> ation	NDC:0597-0590 SUBCUTANEOUS				
tem Code ( Route of Ad	(Source) Iministra	<b>tion</b> ation	NDC:0597-0590 SUBCUTANEOUS				
tem Code ( Route of Ad	(Source) Iministra	tion ation :/Active	NDC:0597-0590 SUBCUTANEOUS		Basis of S	strength	Strength
item Code ( Route of Ad Active Ing	(Source) Iministra <b>redient</b>	tion ation :/Active Ingred	NDC:0597-0590 SUBCUTANEOUS Moiety	FYS6T7F842)	Basis of S ADALIMUMAB	strength	
Item Code ( Route of Ad Active Ing	(Source) Iministra <b>redient</b>	tion ation :/Active Ingred	NDC:0597-0590 SUBCUTANEOUS Moiety ient Name	FYS6T7F842)		ötrength	
Product II Item Code ( Route of Ad Active Ing ADALIMUMAE Packaging	(Source) Iministra redient	tion ation :/Active Ingred	NDC:0597-0590 SUBCUTANEOUS Moiety ient Name	FYS6T7F842)		itrength	<b>Strength</b> 40 mg in 0.8 ml
Item Code ( Route of Ad <b>Active Ing</b> Adalimumae	(Source) Iministra redient	tion ation :/Active Ingred 56T7F842)	NDC:0597-0590 SUBCUTANEOUS Moiety ient Name		ADALIMUMAB	Strength rketing rt Date	-
Active Ing Active Ing Addlimumae Packaging	(Source) Iministra redient	tion ation :/Active Ingred 56T7F842)	NDC:0597-0590 SUBCUTANEOUS Moiety ient Name (ADALIMUMAB - UNII:F		ADALIMUMAB	rketing	40 mg in 0.8 ml Marketing
Active Ing Active Ing Addlimumae Packaging Item Code NDC:0597-	Source) Iministra redient (UNII: FYS (UNII: FYS ) 1 in 1 T 0.8 mL i	tion ation Ation Active Ingred 56T7F842) RAY	NDC:0597-0590 SUBCUTANEOUS Moiety ient Name (ADALIMUMAB - UNII:F	ption	ADALIMUMAB	rketing	40 mg in 0.8 ml Marketing
Active Ing Active Ing Active Ing ADALIMUMAE	Source) Iministra redient (UNII: FYS (UNII: FYS ) 1 in 1 T 0.8 mL i	tion ation Ation Active Ingred 56T7F842) RAY	NDC:0597-0590 SUBCUTANEOUS Moiety ient Name (ADALIMUMAB - UNII:F	ption	ADALIMUMAB	rketing	40 mg in 0.8 m Marketing
tem Code ( Route of Ad Active Ing ADALIMUMAE Packaging Item Code NDC:0597- 0590-26	Source) Iministra redient (UNII: FYS (UNII: FYS ) 1 in 1 TI 0.8 mL i Device/S	tion tion /Active Ingred 56T7F842)	NDC:0597-0590 SUBCUTANEOUS Moiety ient Name (ADALIMUMAB - UNII:f	ption	ADALIMUMAB	rketing	40 mg in 0.8 m Marketing

Category	у		Citation		Date		Date
BLA		BLA761058		10/01/202	23		
Part 2 of	2						
ALCOHO							
isopropyl alco	ohol s	wab					
Product In	form	ation					
Route of Adr	ninist	ration	TOPICAL				
Active Ingr	edier	nt/Active	Moiety				
		Ingr	edient Name		Basis Streng		Strength
		L (UNII: ND2I	M416302) (ISOPROPYL ALCOHOL -		ISOPROPYL		0.7 mL
UNII:ND2M41630	JZ)				ALCOHOL		in 1 mL
Inactive In	gredi	ents					
		Ing	redient Name			Streng	gth
WATER (UNII: 0	59QF0	KO0R)					
Packaging							
# Item Code		Packa	age Description	Marketin Dat	_	Mark	eting End Date
1	1 mL i Produc		Type 0: Not a Combination				
Marketin	g In	format	ion				
Marketin Categor		Applicat	tion Number or Monograph Citation		ting Start Date	Mar	keting End Date
OTC MONOGRAN	РΗ	M003		10/31/202	20		
Marketin	g In	format	ion				
Marketin Categor		Applicat	tion Number or Monograph Citation		ting Start Date	Mar	keting End Date
BLA		BLA761058		10/01/202	23		

adalimumab-ao	dbm kit					
Product Inf	ormation					
Product Type	HUMA	N PRESCRIPTION DRUG	Item Co	ode (Sou	rce) N	IDC:0597-0555
Packaging						
# Item Co	de Pa	ckage Description	Marketing	Start Da	nte Marke	eting End Date
<b>1</b> NDC:0597-055		1 CARTON	10/01/2023			
1	1 in	1 KIT				
Our at the of	Deste					
Quantity of Part #		ao Quantity		Total D	roduct Quar	<b></b>
Part # Part 1 1 SYRIN		ge Quantity	0.4 mL			itity
Part 2 1 PACK			1 mL			
Part 1 of	<b>ว</b>					
ADALIMU	MAB-AI	DBM				
adalimumab-a	idbm inject	ion, solution				
Product Inf						
Item Code (So		NDC:0597-0550				
Route of Adm	inistration	SUBCUTANEOUS				
Active Ingre	diont/Act	tivo Moioty				
Active mgre		redient Name		Basis	of Strength	Strength
		842) (ADALIMUMAB - UNII	:FYS6T7F842)	ADALIMU	-	20 mg in 0.4 mL
Packaging						
# Item		Package Descr	iption		Marketing Start Date	Marketing End Date
<sup>#</sup> Code						
Code	1 in 1 TRAY					
Code           1         NDC:0597- 0550-06	0.4 mL in 1 S	YRINGE; Type 3: Prefilled m (syringe, patch, etc.)	l Biologic Delivery			
Code           1         NDC:0597- 0550-06	0.4 mL in 1 S		l Biologic Delivery			
Code           1         NDC:0597- 0550-06	0.4 mL in 1 S Device/Syste	m (syringe, patch, etc.)	l Biologic Delivery			

BLA	۱.		BLA761058		10/01/2	023		
Pa	art 2 of	2						
A	LCOHO	L PR	EP					
iso	propyl alco	ohol s	wab					
Pr	oduct In	form	ation					
Ro	ute of Adr	ninist	ration	TOPICAL				
Ac	tive Ingr	edier	nt/Active	Moiety			_	
			Ingr	edient Name		Basis Stren		Strength
	PROPYL AL		L (UNII: ND2I	M416302) (ISOPROPYL ALCOHOL		ISOPROPYL ALCOHOL		0.7 mL in 1 mL
Ina	active In	gredi	ents					
14/ 4			_	redient Name			Stren	gth
VVA	TER (UNII: C	ISAALOI	(UUR)					
	ckaging Item				Marketi	ing Start	Marl	ceting End
#	Code			age Description		ate	Fidir	Date
1		1 mL i Produc		Type 0: Not a Combination				
Μ	arketin	g In	format	ion				
	Marketin Categor		Applicat	tion Number or Monograp Citation	h Mark	eting Start Date	Ма	rketing End Date
	C MONOGRAI	-	M003		10/31/2	020		
М	arkotin		format	ion				
	Marketin	-	format Applicat	ION tion Number or Monograp	h Mark	eting Start	Ма	rketing End
BLA	Categor		BLA761058	Citation	10/01/2	Date		Date
			DIA/01058		10/01/2	023		

adalimumab-adbm kit

Product Info						
Product Type	HUMAN PR	ESCRIPTION DRUG	ltem Co	de (Source)	NE	0C:0597-0585
Packaging						
# Item Cod	e Packa	ge Description	Marketing S	Start Date	Market	ing End Date
1 NDC:0597-0585		• •	10/01/2023			0
1	1 in 1 KIT					
Quantity of P	Parts					
Part #	Package (	Duantity		Total Produ	ct Ouant	itv
Part 1 1 SYRING	-	( <b>)</b>	0.2 mL			<b>,</b>
Part 2 1 PACKET	-		1 mL			
Part 1 of 2						
ADALIMUM	1AB-ADBI	Μ				
adalimumab-ad	bm injection,	solution				
Item Code (Sou Route of Admin	istration	NDC:0597-0580 SUBCUTANEOUS				
Active Ingred						
	-	ient Name		Basis of St	-	Strength
Packaging		(Adalimumab - Unii:F	130171042)			10 mg in 0.2 mL
# Item Code		Package Descrij	ption		keting t Date	Marketing End Date
	in 1 TRAY			Star	t Date	End Date
		GE; Type 3: Prefilled ringe, patch, etc.)	Biologic Delivery			
Marketing	Informat	ion				
Marketing Category		tion Number or M Citation	lonograph	Marketing St Date	tart N	Aarketing End Date
BLA	BLA761058		1	0/01/2023		
			-	0,01,2025		

Part 2 of	2						
ALCOHO							
Product In	form	ation					
Route of Adr	ninist	ration	TOPICAL				
Active Ingr	edier	nt/Active	Moiety				
		Ingr	edient Name		Basis Stren		Strength
ISOPROPYL AL		L (UNII: ND2)	M416302) (ISOPROPYL ALCOHO	L -	ISOPROPYL ALCOHOL	-	0.7 mL in 1 mL
Inactive In	gredi	ents					
		Ing	redient Name			Stren	gth
WATER (UNII: 0	59QF0	KO0R)					
Packaging							
# Item Code		Packa	age Description	Marketi Da		Mark	eting End Date
1	1 mL i Produ		Type 0: Not a Combination				
Marketin	g In	format	ion				
Marketin Categor		Applica	tion Number or Monogra <sub>l</sub> Citation	oh Marko	eting Start Date	Mar	keting End Date
OTC MONOGRAI DRUG	РΗ	M003		10/31/20	20		
Marketin	g In	format	ion				
Marketin Categor	g		tion Number or Monogra Citation	oh Marko	eting Start Date	Mar	keting End Date
BLA		BLA761058		10/01/20	23		

adalimumab-adbm kit

## **Product Information**

	ct Type	HUMAN PR	ESCRIPTION DRUG	ltem Co	de (Source	) NI	DC:0597-0545
Packa	aging						
# H	tem Code	Packa	ge Description	Marketing	Start Date	Marke	ting End Date
1 NDC:	0597-0545-2	2 2 in 1 CA	RTON	10/01/2023			
1		1 in 1 KIT					
<b>2</b> NDC:	0597-0545-4	4 4 in 1 CA	RTON	10/01/2023			
2		1 in 1 KIT					
3 NDC:	0597-0545-6			10/01/2023			
3		1 in 1 KIT					
Quant	tity of Pa	irts					
Part #	•	Package (	Quantity		<b>Total Prod</b>	uct Quan	tity
Part 1	1 SYRINGE			0.8 mL			
Part 2	1 PACKET			1 mL			
Part	1 of 2						
		AB-ADBI	м				
	-						
auaiim		m injection,	Solution				
Produ	uct Inform	mation					
ltem C	ode (Sour	ce)	NDC:0597-0540				
Route	of Adminis	stration	SUBCUTANEOUS				
Active	e Ingredie	ent/Active	Moiety				
	-	Ingred	ient Name		<b>Basis of</b>	Strength	Strength
ADALIM	IUMAB (UNII:	-	(ADALIMUMAB - UNII:I	FYS6T7F842)	ADALIMUMAE	-	40 mg in 0.8 m
							-
Packa	aging						
H	em ode		Package Descri	ption		arketing art Date	Marketing End Date
<b>1</b> NDC: 0540	0597- -10 1 in	1 TRAY					
1			GE; Type 3: Prefilled rringe, patch, etc.)	Biologic Delivery			
			5-, parai, etc.,				
Marl	otina I	nformat	ion				

Category			Citation		Date		Date
BLA		BLA761058		10/01/20	23		
Part 2 of	2						
ALCOHOL	PR	EP					
isopropyl alco	hol s	wab					
Product Inf	orm	ation					
Route of Adm	inist	ration	TOPICAL				
Active Ingre	dier	nt/Active	Moiety				
		Ingr	edient Name		Basis Stren		Strength
ISOPROPYL ALC UNII:ND2M416302		L (UNII: ND2I	M416302) (ISOPROPYL ALCOHOL -		ISOPROPYL ALCOHOL		0.7 mL in 1 mL
Inactive Ing	redi	ents					
		Ing	redient Name			Stren	gth
WATER (UNII: 05	9QF0I	KO0R)					
Packaging							
# Item Code		Packa	age Description	Marketir Da	-	Mark	eting End Date
1 2	2 in 1	TRAY					
	1 mL i Produo		Type 0: Not a Combination				
Marketing	g In	format	ion				
Marketing Category		Applica	tion Number or Monograph Citation		eting Start Date	Maı	keting End Date
OTC MONOGRAPH DRUG	Η	M003		10/31/20	20		
Marketing	g In	format	ion				
- Marketing Category	- 1		tion Number or Monograph Citation		eting Start Date	Mar	keting End Date
BLA		BLA761058		10/01/20	23		

# ADALIMUMAB-ADBM adalimumab-adbm kit

	-	forma	-						
Produ	ct Typ	е	HUMAN PRE	ESCRIPTION DRUG	ltem Co	de (S	ource)	ND	C:0597-0575
Packa	aging								
# I	tem C	ode	Packa	ge Description	Marketing	Start	Date Ma	rketi	ing End Date
1 NDC:	0597-05	575-50	2 in 1 CAF	RTON	04/30/2024				
1			1 in 1 KIT						
2 NDC:	0597-05	575-40	4 in 1 CAF	RTON	04/30/2024				
2			1 in 1 KIT						
3 NDC:	0597-05	575-60	6 in 1 CAF	RTON	04/30/2024				
3			1 in 1 KIT						
Quan	titv o	f Part	5						
Part #	-		s ackage Q	Juantity		Tota	l Product Q	uanti	ity
Part 1	1 SYR			. ,	0.4 mL				•
Part 2	1 PAC	KET			1 mL				
Part	1 of	2							
		-							
adalim	umab-	adbm	injection,	solution					
Produ	uct In	forma	ation						
ltem C	ode (S	Source	)	NDC:0597-0570					
Route	of Adı	ministr	ation	SUBCUTANEOUS					
			. /						
ACTIVE	e Ingr	edien	t/Active						
			-	ent Name			is of Streng		Strength
ADALIM	IUMAB	(UNII: FY	'S6T7F842)	(ADALIMUMAB - UNII:F	FYS6T7F842)	ADAL	IMUMAB	4	40 mg in 0.4 mL
Devi									
Packa									
H	em ode			Package Descrij	ption		Marketir Start Da		Marketing End Date
1 NDC: 0570	0597- -32	1 in 1 <sup>-</sup>	FRAY						
1				GE; Type 3: Prefilled ringe, patch, etc.)	Biologic Delivery				
			,	5					

M	arketin	ıg In	format	ion					
	Marketin Categor		Applica	tion Number or Monograp Citation	h		ting Start Date	Ма	rketing End Date
BLA	-	,	BLA761058			10/01/202	23		
Pa	art 2 of	2							
AI	соно	L PR	EP						
iso	propyl alc	ohols	wab						
Pr	oduct In	form	ation						
Ro	ute of Adı	minist	ration	TOPICAL					
Ac	tive Ingr	edien	nt/Active	Moiety					
			Ingr	edient Name			Basis Streng		Strength
	PROPYL AL		<b>L</b> (UNII: ND2	M416302) (ISOPROPYL ALCOHOL	-		ISOPROPYL ALCOHOL		0.7 mL in 1 mL
		02)					ALCOHOL		
Ina	active In	gredi	ents						
	//		•	redient Name				Stren	gth
VV A	TER (UNII: C	JS9QFU	(OUR)						
Pa	ckaging								
#	ltem Code		Pack	age Description	ſ	Marketin Dat		Marl	ceting End Date
1		2 in 1							
1		1 mL i Produc		Type 0: Not a Combination					
M	arketin	ıg In	format	ion					
	Marketin Categor		Applica	tion Number or Monograp Citation	h		ting Start Date	Ма	rketing End Date
OT( DRL	C MONOGRA JG	PH	M003			10/31/202	20		
R.A	arketin	ıg In	format	ion					
<b>IVI</b>							ting Start		rketing End

04/30/2024

	_					
Product Info	rmation					
Product Type	HUMAN PR	ESCRIPTION DRUG	Item Co	de (Sour	r <b>ce)</b> N	DC:0597-0565
Packaging						
# Item Cod	e Packa	ge Description	Marketing	Start Da	te Marke	ting End Date
<b>1</b> NDC:0597-0565-			04/30/2024			
1	1 in 1 KIT					
	_					
Quantity of P						
Part # Part 1 SYRING	Package (	quantity	0.4 mL	lotal Pr	oduct Quan	tity
Part 2 1 PACKET			1 mL			
		м				
ADALIMUM adalimumb-adb Product Infor Item Code (Sou	<b>1AB-ADBI</b> m injection, s r <b>mation</b> arce)					
ADALIMUM adalimumb-adb Product Infor Item Code (Sou Route of Admin	<b>1AB-ADBI</b> m injection, s mation (rce) (istration	olution NDC:0597-0560 SUBCUTANEOUS				
ADALIMUM adalimumb-adb Product Infoi Item Code (Sou Route of Admin	<b>IAB-ADBI</b> m injection, s mation (rce) (istration	olution NDC:0597-0560 SUBCUTANEOUS Moiety		Basis	of Strength	Strength
ADALIMUM adalimumb-adb Product Infor Item Code (Sou Route of Admin	<b>IAB-ADBI</b> m injection, s mation (rce) (istration (ient/Active Ingredi	olution NDC:0597-0560 SUBCUTANEOUS	YS6T7F842)	Basis	of Strength MAB	Strength 40 mg in 0.4 m
Packaging # Item	<b>IAB-ADBI</b> m injection, s mation (rce) (istration (ient/Active Ingred) (III: FYS6T7F842)	olution NDC:0597-0560 SUBCUTANEOUS Moiety ient Name (ADALIMUMAB - UNII:F		ADALIMU	MAB Marketing	40 mg in 0.4 m Marketing
ADALIMUM adalimumb-adb Product Infor Item Code (Sou Route of Admin Active Ingred ADALIMUMAB (UN Packaging # Item Code	<b>IAB-ADBI</b> m injection, s rmation irce) iistration lient/Active Ingredi III: FYS6T7F842)	olution NDC:0597-0560 SUBCUTANEOUS Moiety ient Name		ADALIMU	МАВ	40 mg in 0.4 m
ADALIMUM adalimumb-adb	<b>IAB-ADBI</b> m injection, s         rmation         irce)         istration         istration         ient/Active         Ingredi         iii: FYS6T7F842)         in 1 TRAY	olution NDC:0597-0560 SUBCUTANEOUS Moiety ient Name (ADALIMUMAB - UNII:F	otion	ADALIMU	MAB Marketing	40 mg in 0.4 m Marketing

Marketing Marketing Category BLA Part 2 of 2 ALCOHOL isopropyl alcoh	Applica BLA761058 PREP	tion Number or Monograph Citation		<b>ting Start</b> Date		eting End Date	
Part 2 of 2 ALCOHOL	2 PREP						
ALCOHOL	PREP						
ALCOHOL	PREP						
sopropyl alcor							
	ol swab						
Product Info	rmation						
Route of Admi	nistration	TOPICAL					
Active Ingree	dient/Active	Moiety					
	Ingr	edient Name		Basis of Strength Stren		Strength	
		M416302) (ISOPROPYL ALCOHOL -		ISOPROPYL 0.7		7 mL	
JNII:ND2M416302	)			ALCOHOL		n 1 mL	
Inactive Ingr						-	
WATER (UNII: 059	-	redient Name	Strength				
Packaging "Item			Marketing Start		Marketing End		
# Code	Pack	age Description	Dat			ate	
	mL in 1 PACKET; roduct	Type 0: Not a Combination					
	1						
Marketing		tion Number or Monograph	Marka	ting Start	Marke	ting End	
Markoting	Applica	Citation		Date		Marketing End Date	
Marketing Category			10/31/2020				
Category DTC MONOGRAPH	M003		10/31/202	0			
Category OTC MONOGRAPH	M003		10/31/202	0			
Category OTC MONOGRAPH DRUG		ion	10/31/202	0			
	Informat	i <b>on</b> tion Number or Monograph Citation	Marke	ting Start Date		eting End Date	

## Labeler - Boehringer Ingelheim Pharmaceuticals, Inc. (603175944)

# **Registrant -** Boehringer Ingelheim Pharmaceuticals, Inc. (603175944)

Establishment						
Name	Address	ID/FEI	Business Operations			
Boehringer Ingelheim Fremont, Inc		967820619	API MANUFACTURE(0597-0545, 0597-0555, 0597-0565, 0597-0575, 0597-0585, 0597-0595), MANUFACTURE(0597-0545, 0597-0555, 0597-0565, 0597-0575, 0597-0585, 0597-0595), LABEL(0597-0545, 0597-0555, 0597-0565, 0597-0575, 0597-0585, 0597-0595), PACK(0597-0545, 0597-0555, 0597-0565, 0597-0575, 0597-0585, 0595)			

## Establishment

Name	Address	ID/FEI	Business Operations
Catalent Indiana, LLC		172209277	MANUFACTURE(0597-0545, 0597-0555, 0597-0585, 0597-0595)

Revised: 5/2024

Boehringer Ingelheim Pharmaceuticals, Inc.