Adalimumab is a biologic response modifier, or biologic, indicated for the treatment of patients with chronic long-term inflammatory disorders of the skin and other systems. It gained US FDA approval for the treatment of rheumatoid arthritis in 2002. Currently, adalimumab is indicated for the treatment of seven other immune conditions.

**Mechanism:** Adalimumab is an injectable protein antibody which inactivates tumor necrosis factor (TNF). TNF is a pro-inflammatory cytokine. Its dysregulation leads to excessive amounts of circulating TNF, which results in a chronic inflammatory response. TNF alpha is the key mediator and source of inflammation in several autoimmune diseases. TNF is found in excess in synovial fluid and psoriatic plaques. Adalimumab binds to TNF-alpha and blocks its interaction with p55 and p75 located on the TNF receptor, thereby acting as a TNF alpha inhibitor. In addition, adalimumab in vitro has also been shown to also lyse cells that produce TNF alpha.

**Uses:**
- Adults (18 years and older) with chronic, moderate to severe plaque psoriasis in patients who are candidates for systemic or phototherapy, and when other systemic therapies are medically less appropriate
- Psoriatic arthritis (PsA)
- Moderate to severe rheumatoid arthritis (RA)
- Moderate to severe Crohn’s disease (CD)
- Moderate to severe ulcerative colitis (UC)
- Ankylosing spondylitis (AS)
- Moderate to severe polyarticular juvenile idiopathic rheumatoid arthritis in children 4 years of age and older (JIA)
- Moderate to severe hidradenitis suppurativa (HS)

Adalimumab can be used alone or in conjunction with other Disease Modifying Anti-rheumatic Drugs (DMARDs) such as methotrexate.

**Side effects:** The side effect profile of adalimumab is similar to the other TNF inhibitors. The most common side effects are flu-like syndrome, sinusitis, abdominal pain, nausea and upper respiratory tract infection. Adalimumab decreases your immune response, thus making you more susceptible to infections and cancers. Injection site reactions such as redness, swelling, itching and rash can occur but usually dissipates over 3-5 days. More serious side effects include autoimmune hepatitis, leukemia, lymphoma and other malignancies, myelosuppression, lupus like syndrome, optic neuritis, multiple sclerosis, seizure, heart failure, aplastic anemia, opportunistic infections and sepsis. All patients who are candidates for treatment with adalimumab need to undergo testing for tuberculosis and hepatitis before beginning treatment, since these diseases can become reactivated.