

HUMIRA

adalimumab

A primer for clinicians and patients

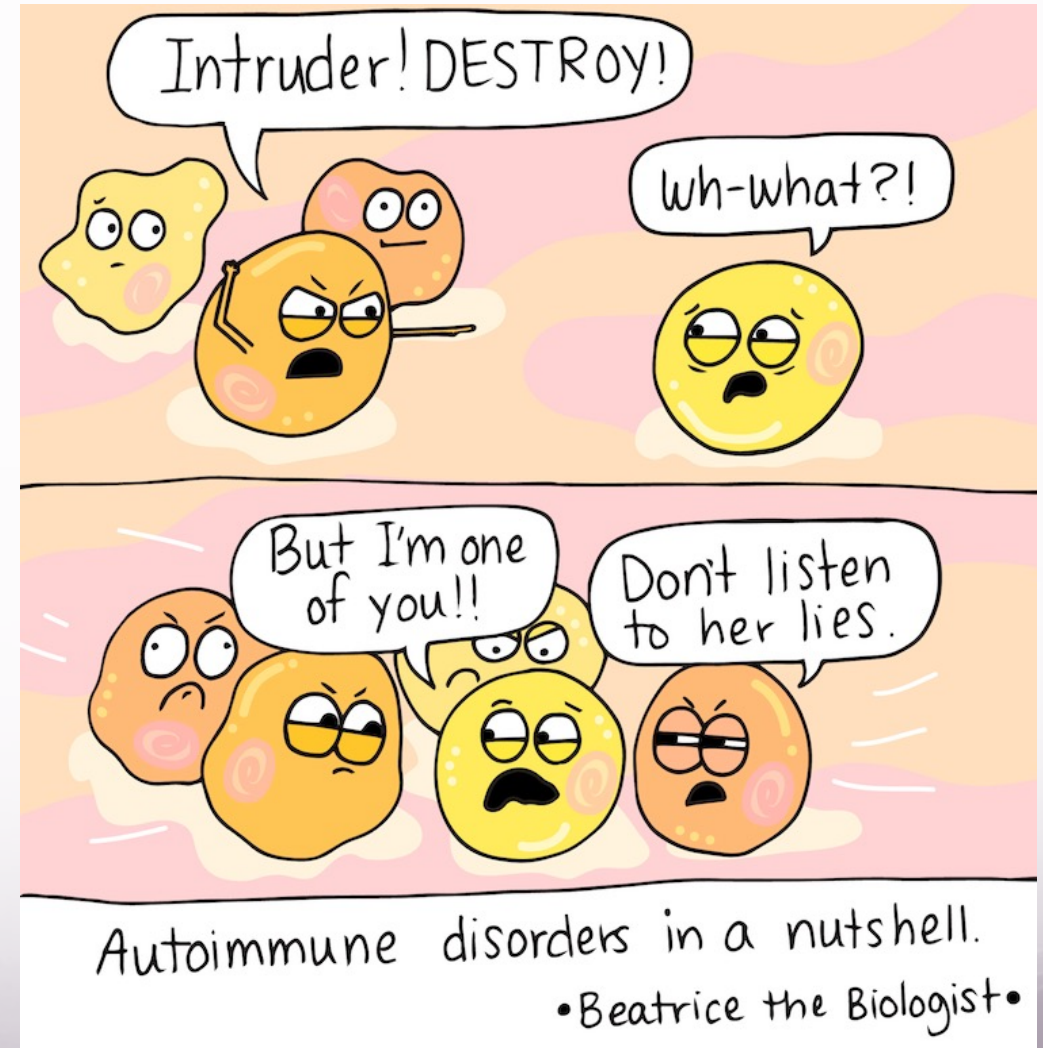
What is Humira?

- Manufacturer: AbbVie
- Humira is a prescription medication used to treat autoimmune diseases
- Binds and blocks TNF- α
- Administered by injection.



What are autoimmune diseases?

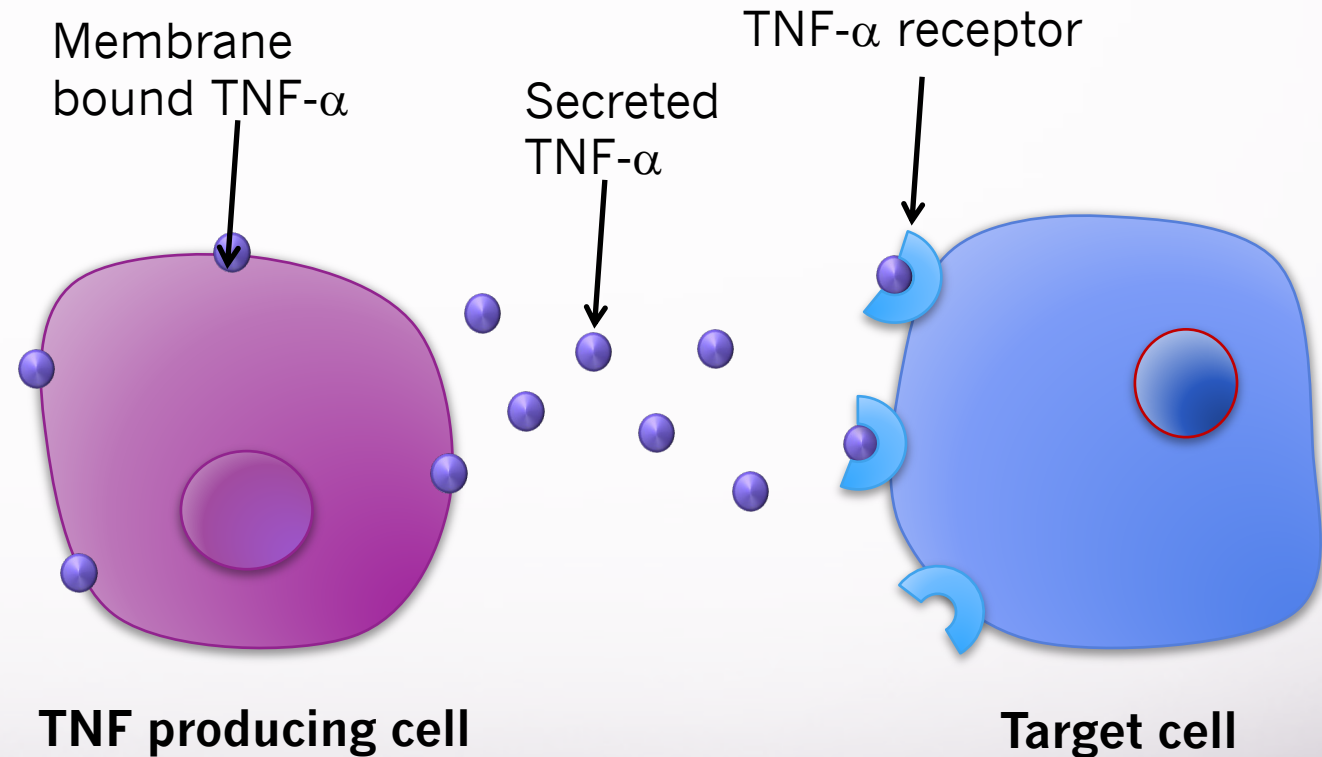
Autoimmune diseases occur when the immune system attacks the body's own tissues and organs.



What is TNF- α ?

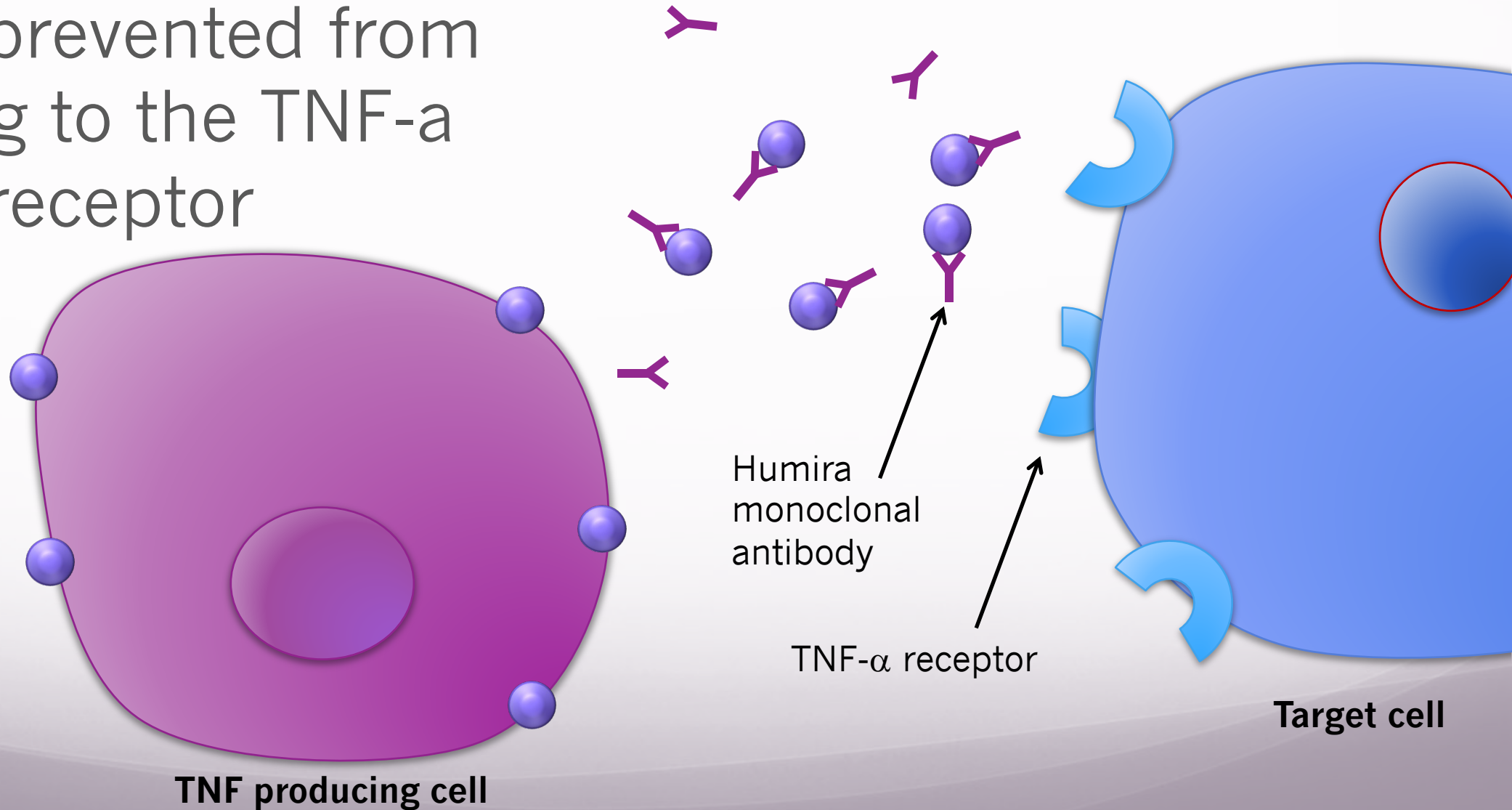
A cytokine (chemical signal) produced by some white blood cells during an immune response.

- Can be membrane bound, or secreted in soluble form.
- Promotes inflammation, fever,
- Causes some cells to self-destruct (apoptosis)
 - Infected cells
 - Cancer cells
 - Can kill normal, healthy cells
- Necessary for immune function, but too much TNF- α can be harmful



Humira binds and blocks TNF-a

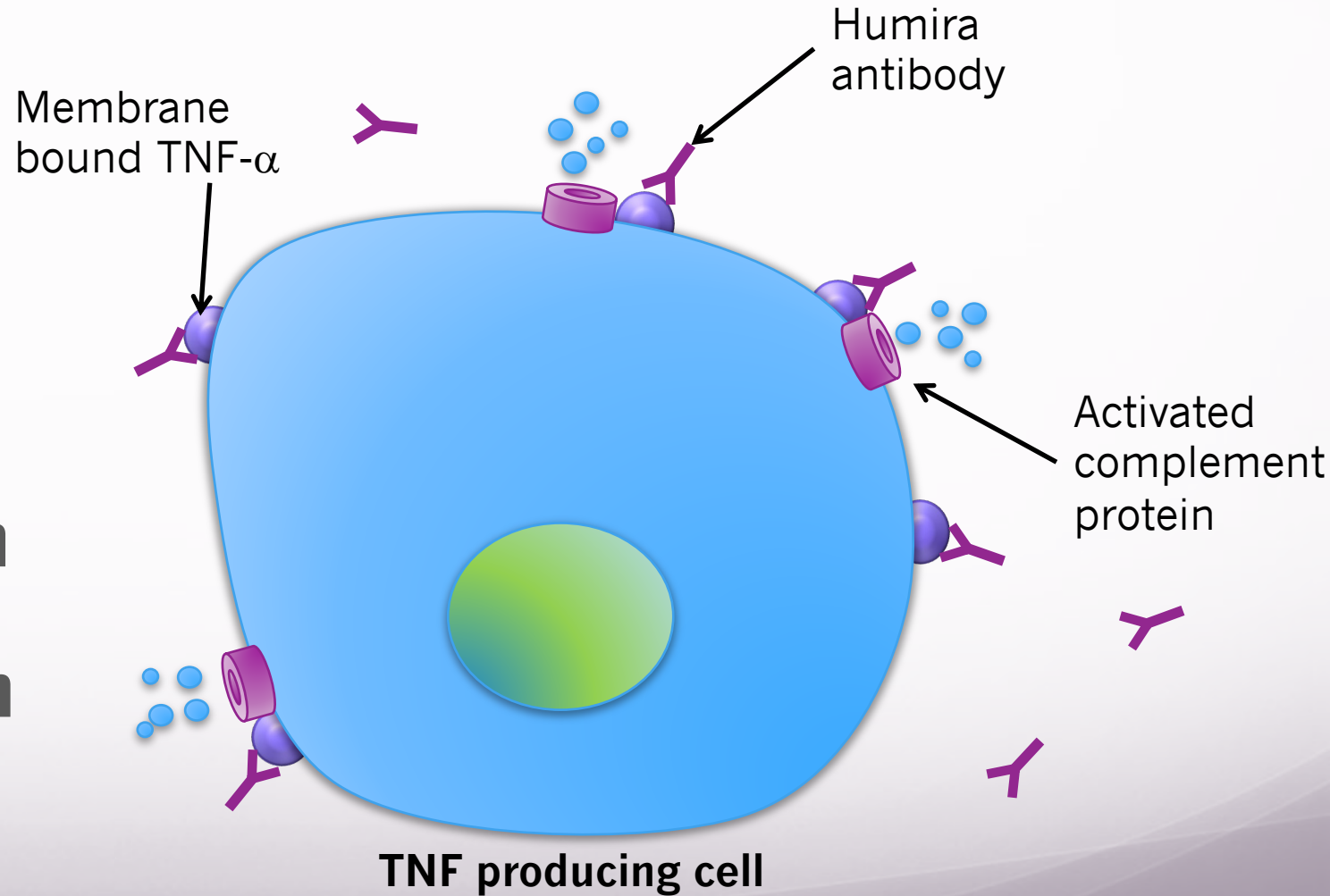
TNF is prevented from binding to the TNF- α receptor



Humira causes death of cells that secrete $\text{TNF-}\alpha$

Cells with membrane bound $\text{TNF-}\alpha$ are targeted by Humira antibodies

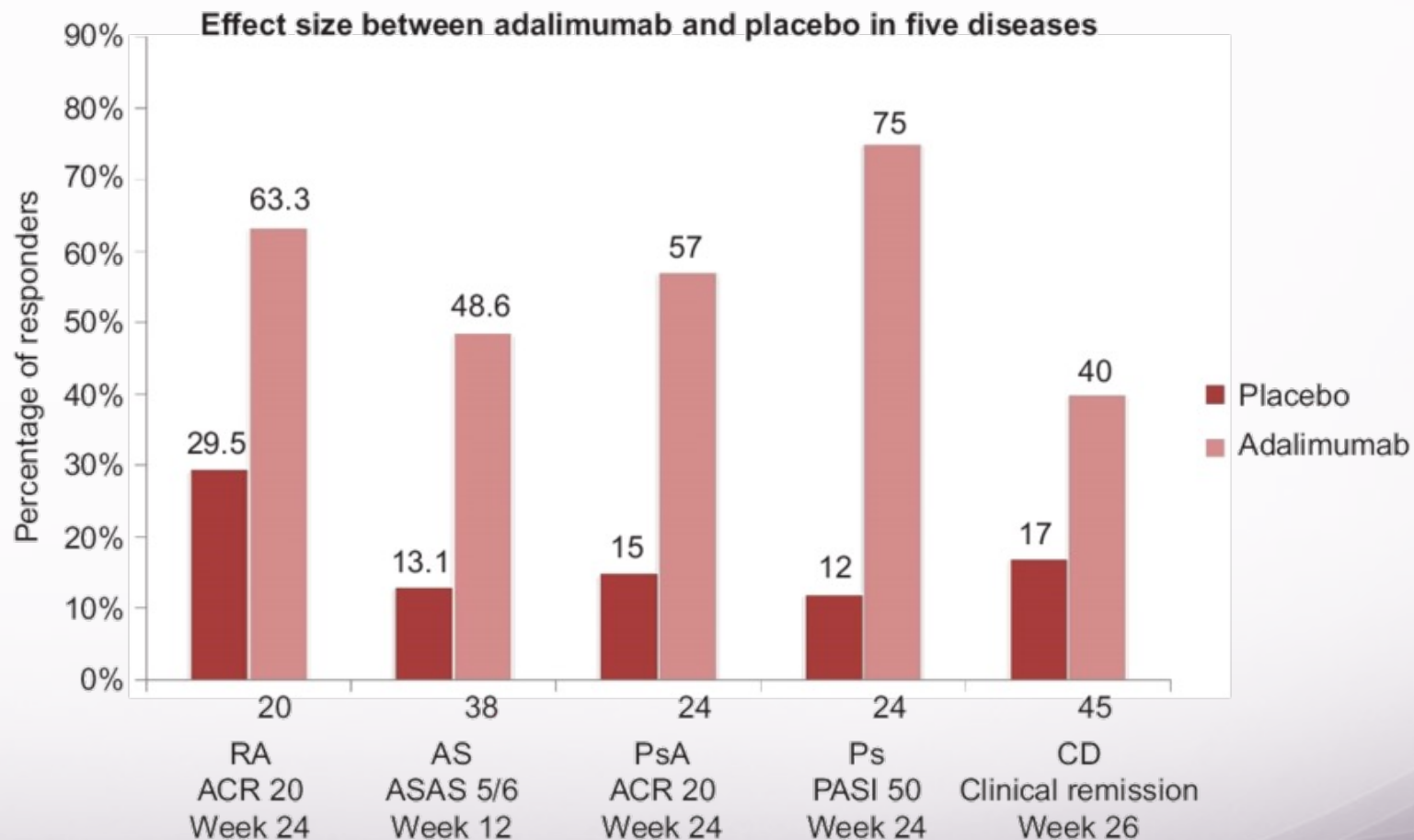
Cell death occurs when activated complement proteins create holes in the cell membrane



Indications and Efficacy

High efficacy against

- Rheumatoid arthritis
- Ankylosing spondylosis
- Psoriatic Arthritis
- Plaque psoriasis
- Crohns disease and ulcerative colitis
- Hidradenitis suppurrativa
- Non-infectious Uveitis



How is Humira administered?

- Subcutaneous injection
 - Syringe
 - Auto-injector pen
- Most patients can self-inject



Side effects and adverse reactions

- Humira inhibits immune function
- Patients may be more susceptible to
 - Infections
 - Respiratory infections
 - urinary tract infections
 - septic arthritis
 - prosthetic and post-surgical infections
 - erysipelas, cellulitis
 - diverticulitis
 - pyelonephritis
 - reactivation of latent tuberculosis and hepatitis B
- Injection site reactions
 - Rash, swelling, pain
- Certain types of cancer
 - Especially lymphoma
- Rare side effects:
 - Neurological demyelination
 - Low white blood cell or platelet counts
 - Thrombocytopenia, leukocytopenia

Precautions and contraindications



Precautions

- history of infections
- current infections
- tuberculosis
- hepatitis B or C
- heart failure
- demyelinating disorders

Contraindications

- active infections
- Allergy to adalimumab

Drug Interactions

- Live vaccines should be avoided while on Humira
- Immune-suppressing drugs and other biologic DMARDs. (Anakinra Abatacept etc...)
- CYP450 substrates with narrow therapeutic index (warfarin, cyclosporine, theophylline)

Precautions for special populations

Pregnant and nursing mothers

- Crosses placenta to fetus
- can be transferred to babies during nursing.

Pediatric: not established

Geriatric

- Use caution: higher incidence of infections and malignancies

