

**Cancerous**

1 2 3 4 5

1 2 3 4 5

**Parasitic**



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Innate

**Natural Killer Cell**


**Bacterial/Viral**

**Cancerous**

1 2 3 4 5

1 2 3 4 5

**Bacterial**



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Adaptive

**Killer T-Cell**

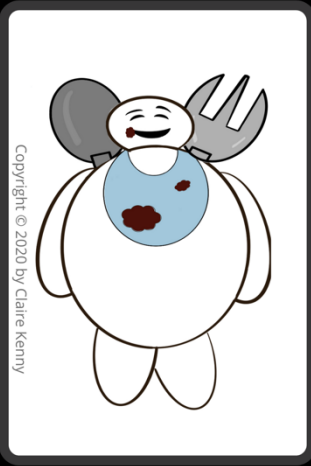
**Viral**

**Cancerous**

1 2 3 4 5

1 2 3 4 5

**Fungal/Parasitic**



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**Macrophage**


**Bacterial/Viral**

**Cancerous**

1 2 3 4 5

1 2 3 4 5

**Bacterial**



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Adaptive

**Plasma B-Cell**

**Viral**



## **Killer T-Cell**

Produces toxic granules containing powerful enzymes that induce the death of pathogen-infected cells.

Effective against virally infected or tumor cells.



## **Natural Killer Cell**

When activated by cytokines, releases cytotoxic granules to destroy altered cells.

Effective against virally infected or tumor cells.



## **Plasma B-Cell**

Produces large quantities of antibodies.



## **Macrophage**

Detects, engulfs and destroys bacteria or other harmful microorganisms.

Can also present antigens to T-cells and release cytokines.



**Cancerous**

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**Fungal**

**Innate Dendritic Cell**

**Bacterial/Viral**

**Parasitic**

1 2 3 4 5

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1 2 3 4 5

**Parasitic**

**Innate Basophil**

**Bacterial/Viral**

**Fungal**

1 2 3 4 5

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**Parasitic/Fungal**

**Innate Neutrophil**

**Bacterial/Viral**

**Cancerous**

1 2 3 4 5

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1 2 3 4 5

**Bacterial**

**Adaptive Helper T-Cell**

**Viral**



## **Basophil**

Responsible for allergic and antigen response.

Excretes histamine and heparin.

Can also release chemical signals to attract eosinophils and neutrophils.



## **Dendritic Cell**

Bind and retain antigens to be presented to T-Cells

Induce the differentiation of germinal B-cells into memory B-cells



## **Helper T-Cell**

Produces cytokines to direct an immune response.

Important in activating B cells, macrophages and killer T cells.



## **Neutrophil**

Usually first responder to a microbial infection and can form pus.

Effective against bacterial or fungal infections.



**Cancerous**

1 2 3 4 5

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**Bacterial**

1 2 3 4 5

**Viral**

Adaptive  
**Regulatory T-Cell**

**Cancerous**

1 2 3 4 5

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1 2 3 4 5

**Bacterial**

1 2 3 4 5

**Viral**

Adaptive  
**Memory B-Cell**

**Parasitic**

1 2 3 4 5

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1 2 3 4 5

**Parasitic**

1 2 3 4 5

**Bacterial/Viral**

Innate  
**Eosinophil**

**Cancerous**

1 2 3 4 5

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1 2 3 4 5

**Parasitic**

1 2 3 4 5

**Bacterial/Viral**

Innate  
**Mast Cell**



## **Memory B-Cell**

"Remembers" each specific pathogen encountered.

Allows the immune system to mount a stronger and faster response to a pathogen detected again.



## **Regulatory T Cell**

Suppresses the immune response.

Maintains homeostasis and self-tolerance.

Helps inhibit T cell proliferation and cytokine production to avoid autoimmunity.



## **Mast Cell**

Carries granules containing histamine and heparin,

Plays a role in the inflammatory process.



## **Eosinophil**

Responds to allergies, parasitic infections, collagen diseases, and diseases of the spleen and central nervous system.

Secretes chemicals that destroy large parasites.

