Immunodeficiency Diseases

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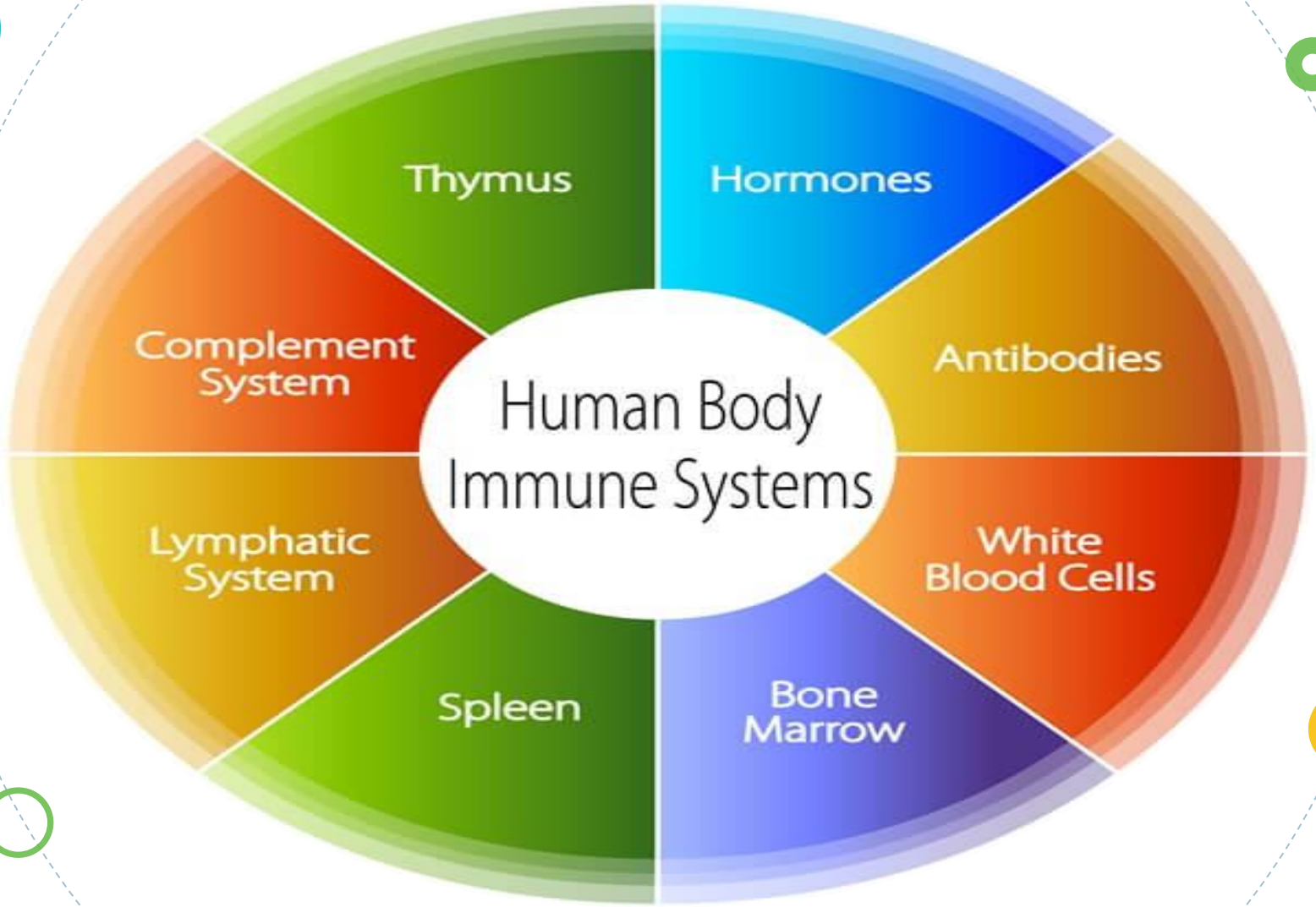
Objectives

- Classify and enumerate immune deficiency diseases.
- Differentiate between primary and secondary immuno deficiency diseases.


Thymus
Hormones
Complement System
Antibodies
Human Body Immune Systems
Lymphatic System
White Blood Cells
Spleen
Bone Marrow

Introduction

Immunodeficiency disorders prevent body from fighting infections and diseases. This type of disorder makes it easier for you to catch viruses and bacterial infections.

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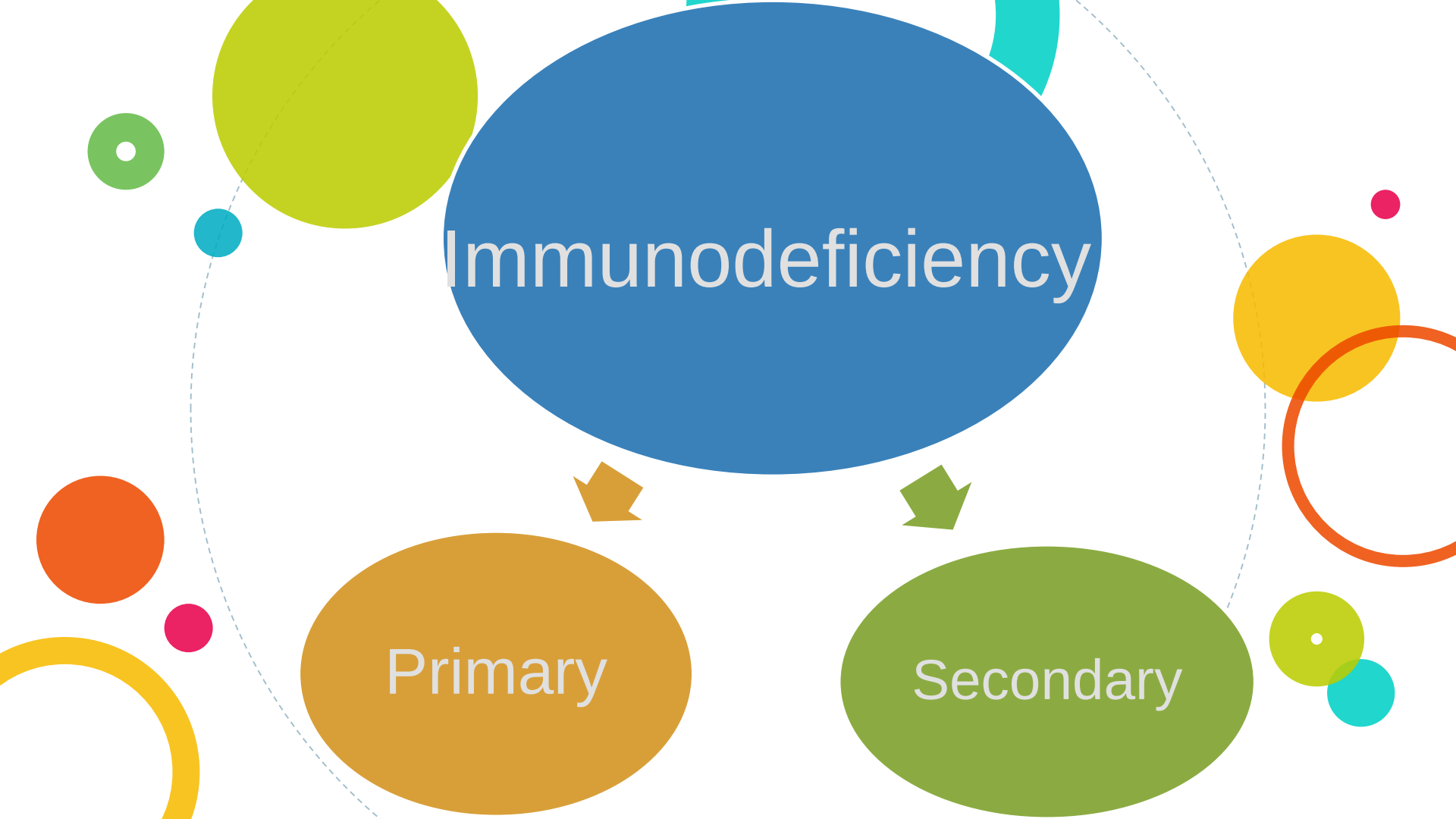
Classification of immunodeficincy diseases


Immunodeficiency
Primary
Secondary

Primary

- Disorders of complement
- Disorders of phagocytosis
- Disorders of specific immunity

Disorders of specific immunity

I. Humoral immunodeficiencies (B-cell defects)

a. X-linked agammaglobulinemia

b. Transient hypogammaglobulinemia of infancy.

c. Common variable immunodeficiency (late onset hypogammaglobulinemia).

d. Selective immunoglobulin deficiencies (IgA, IgM or IgG subclasses).

e. Immunodeficiencies with hyper-IgM.

f. Transcobalamin II deficiency.

Disorders of specific immunity

II. Cellular immunodeficiencies (T-cell defects)

a. Thymic hypoplasia.

b. Purine nucleoside phosphorylase (PNP) deficiency.

Disorders of specific immunity

III. Combined immunodeficiencies (B- and T-cell defects)

a. Cellular immunodeficiency with abnormal immunoglobulin synthesis (Nezelof syndrome).

b. Ataxia telangiectasia.

c. Wiskott-Aldrich syndrome.

d. Immunodeficiency with thymoma

e. Immunodeficiency with short-limbed dwarfism

f. Episodic lymphopenia with lymphocytotoxin

g. Severe combined immunodeficiency

Disorders of complement

a. Complement component deficiencies.

b. Complement inhibitor.

Disorders of phagocytosis

a. Chronic granulomatous disease.

b. Myeloperoxidase deficiency.

c. Chediak-Higashi syndrome.

d. Leukocyte G6PD deficiency.

e. Job’s syndrome.

f. Tuftsin deficiency.

g. Lazy leukocyte syndrome.

h. Hyper-IgE syndrome.

i. Actin-binding protein deficiency.

Secondary

❖ AIDS

Secondary immunodeficiency is far more common than primary immunodeficiency.

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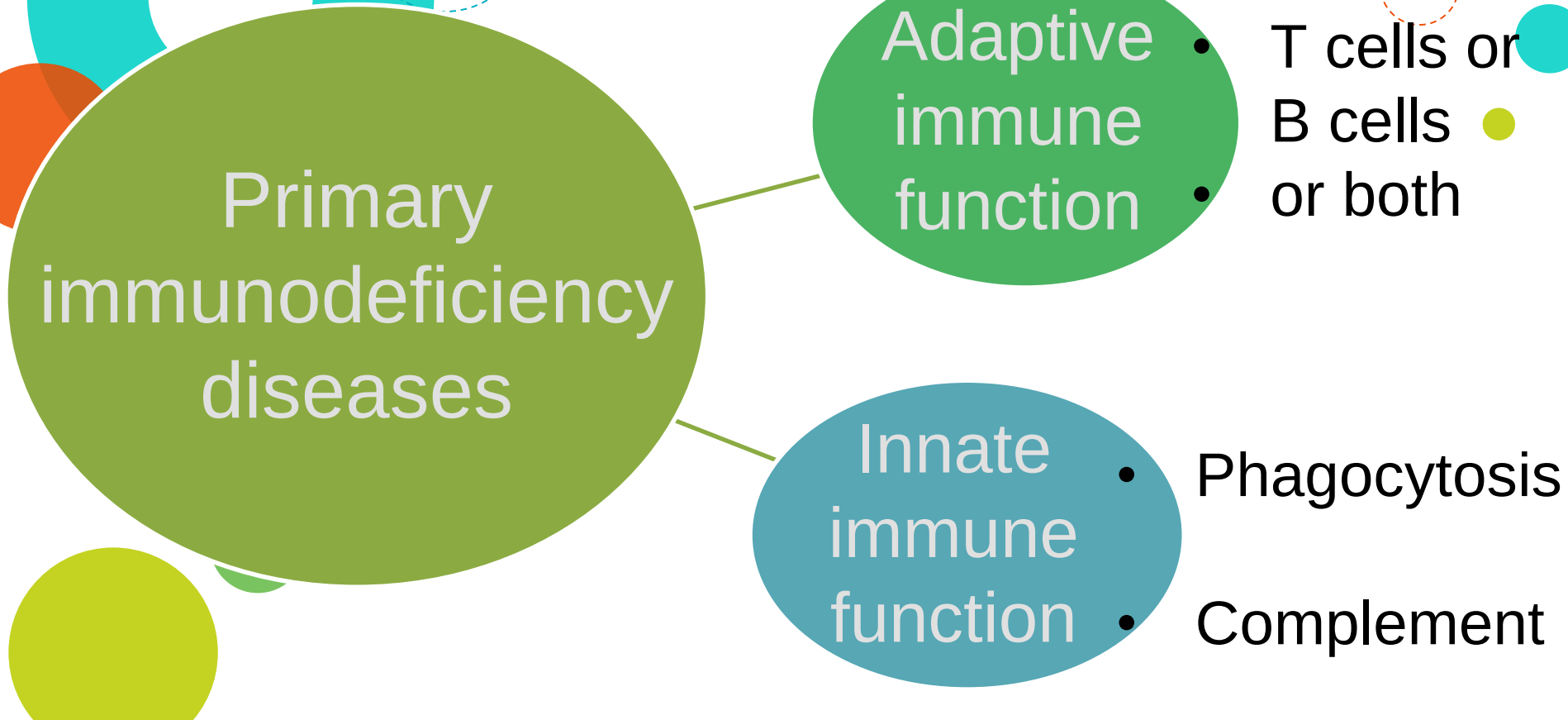
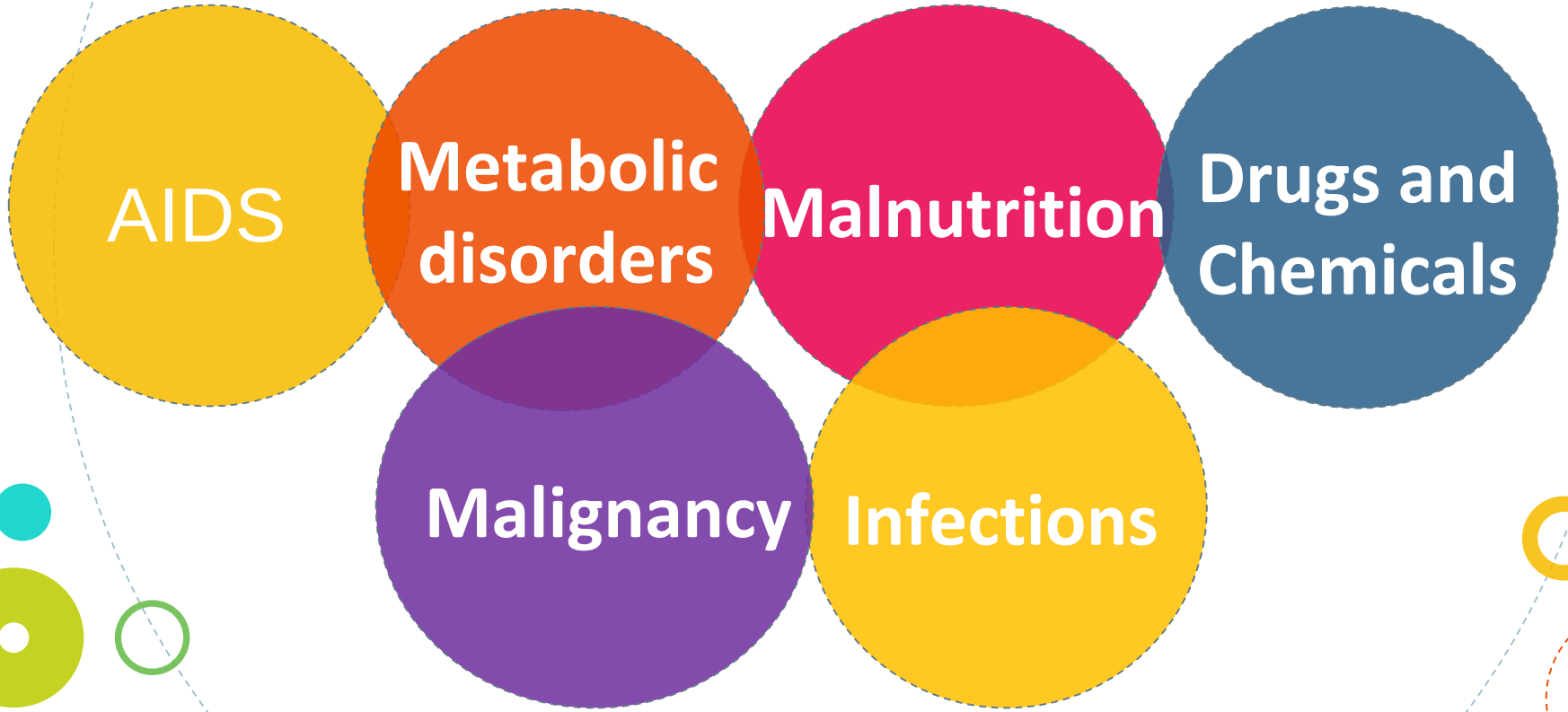
Difference between Primary and Secondary Immunodeficiency


Primary immunodeficiency diseases
Adaptive immune function
T cells or
B cells
or both
Innate immune function
Phagocytosis
Complement

Secondary Immunodeficiency

- Secondary or acquired deficiencies of immunological mechanisms can occur secondarily to a number of disease states. And it’s more common than primary immunodeficiency

Diseases causes secondary immunodeficiency



Summary

Primary Immunodeficiency	Secomdary Immunodeficiency
Most are genatically determined	**Arise as complication of cancer and other diseases**
Less common	**More common**

Thanks!

Any questions?