

医学英語入門

2016

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医学英語講義の到達目標

- ▶ CBTを受験するM4までに必修の基本事項に掲載されている医学用語は英語で読み書きできるようになる。
- ▶ 医学英語で頻回に使われるような abbreviation (省略形) が理解できる。

CBT: Computer Based Iesting

AIDS: Acquired Immunodeficiency Syndrome

HIV: Human Immunodeficiency Virus

医学英単語の基本構造

- ▶ 医学英単語には語源となる用語が存在する。

Ex. 1



Study of Blood (血液学)

Ex. 2

GASTR/O/ENTER/O/LOGY



Study of Stomach and Intestines (消化器病学)

GI

Ex. 3

消化器(胃腸)の病気

GASTROENTERIC DISEASE



- Gastric
- Gastroenteric
- Gastroenterologic

応用編 : Terms using -LOGY (Study of)

- Hematology Study of the blood
- Gastroenterology Study of the stomach and intestine
- Oncology Study of tumors
- Pathology Study of disease
- Dermatology Study of skin
- Endocrinology Study of endocrine glands
- Urology Study of urinary tract
- Cardiology Study of the heart
- Gynecology Study of women and women's disease
- Neurology Study of the nerves and the brain
- Psychology Study of the mind and mental disorders

血液病学
消化器病学
腫瘍学
病理学
皮膚科学
内分泌代謝学
泌尿器科学
循環器病学
婦人科学
神経病学
精神病学

Chapter 5

The Lymphatic System リンパ系

- Capillaries
- Interstitial fluid
- Lymphatic system
- Lymph
- Lymph nodes

毛細血管

間質液

リンパ管構築

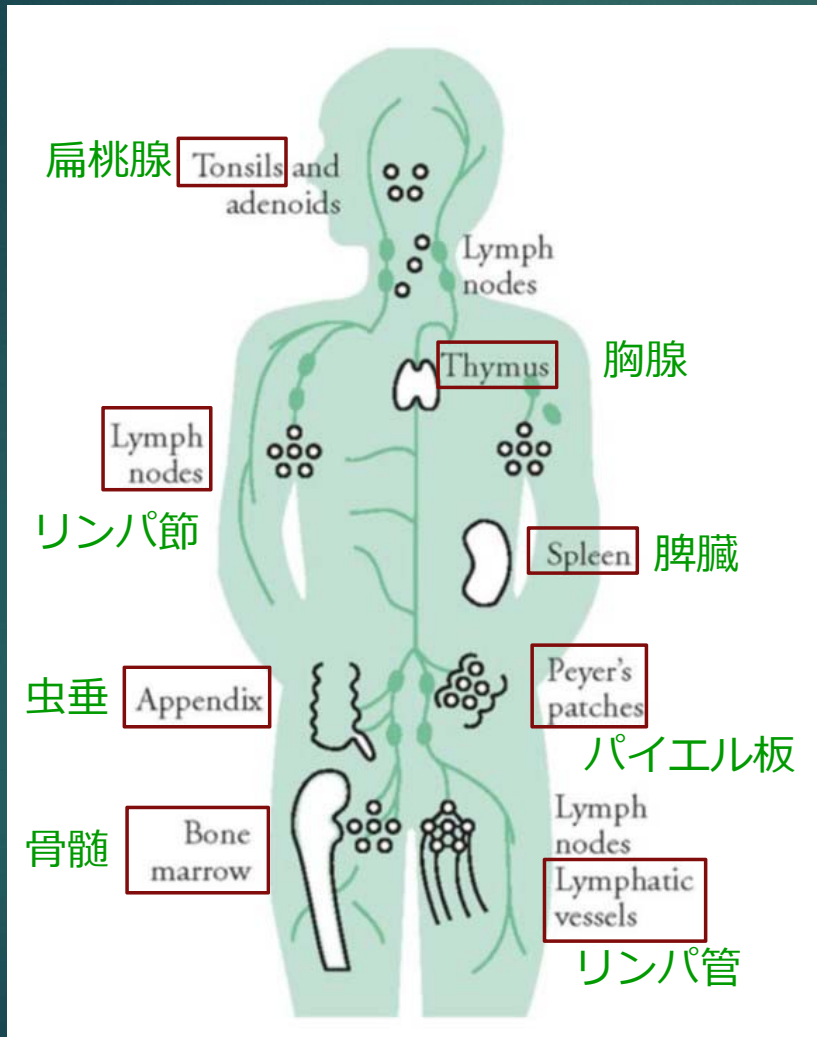
リンパ/リンパ液

リンパ節



The lymphatic system

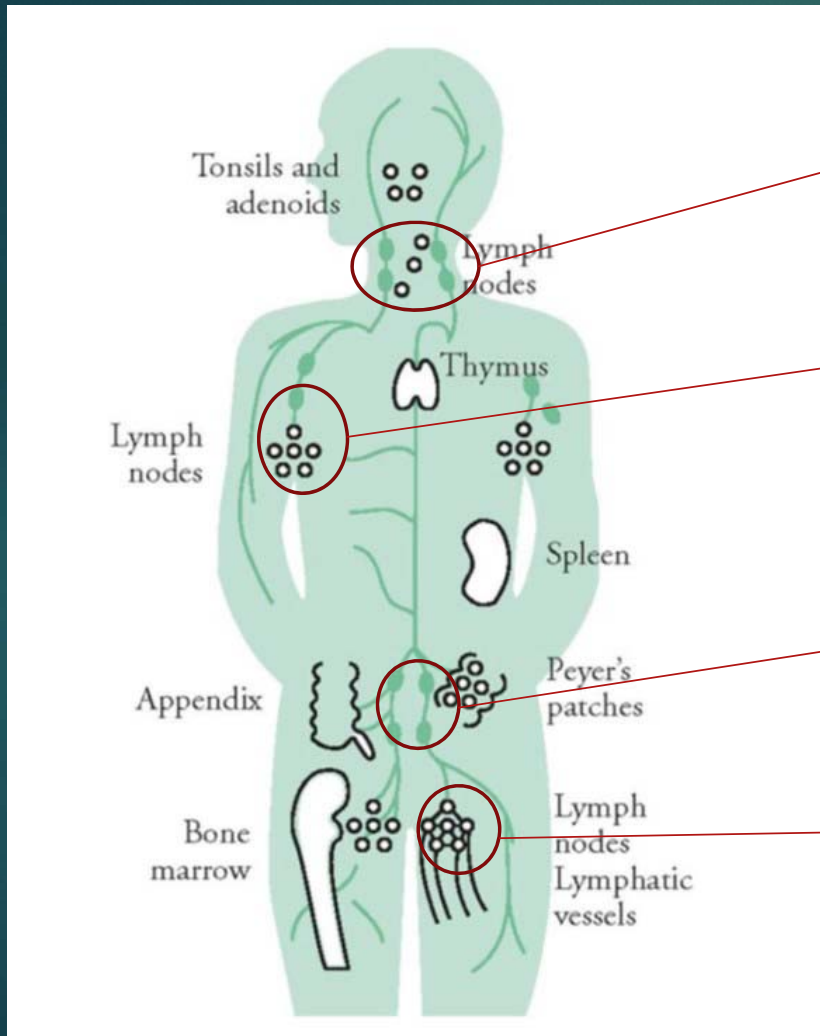
(リンパ系システム)



Lymph Nodes (LNs)

- Deep lymph node
深在性リンパ節
- Superficial lymph node
浅在性リンパ節

The major lymph nodes (主要なリンパ節)

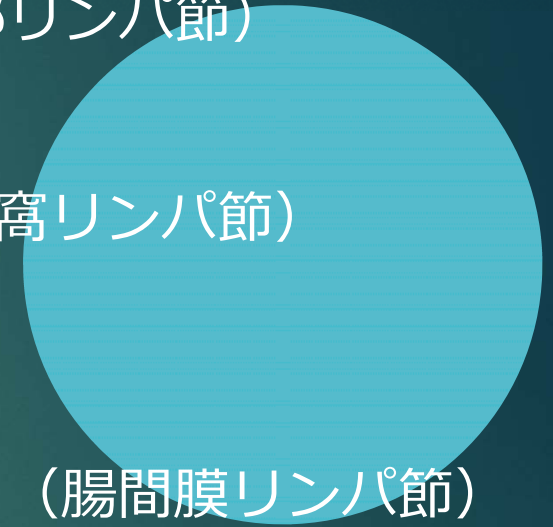


Cervical LNs (頸部リンパ節)

Axillary LNs (腋窩リンパ節)

Mesenteric LNs (腸間膜リンパ節)

Inguinal LNs (鼠径リンパ節)



Structure of the lymph nodes

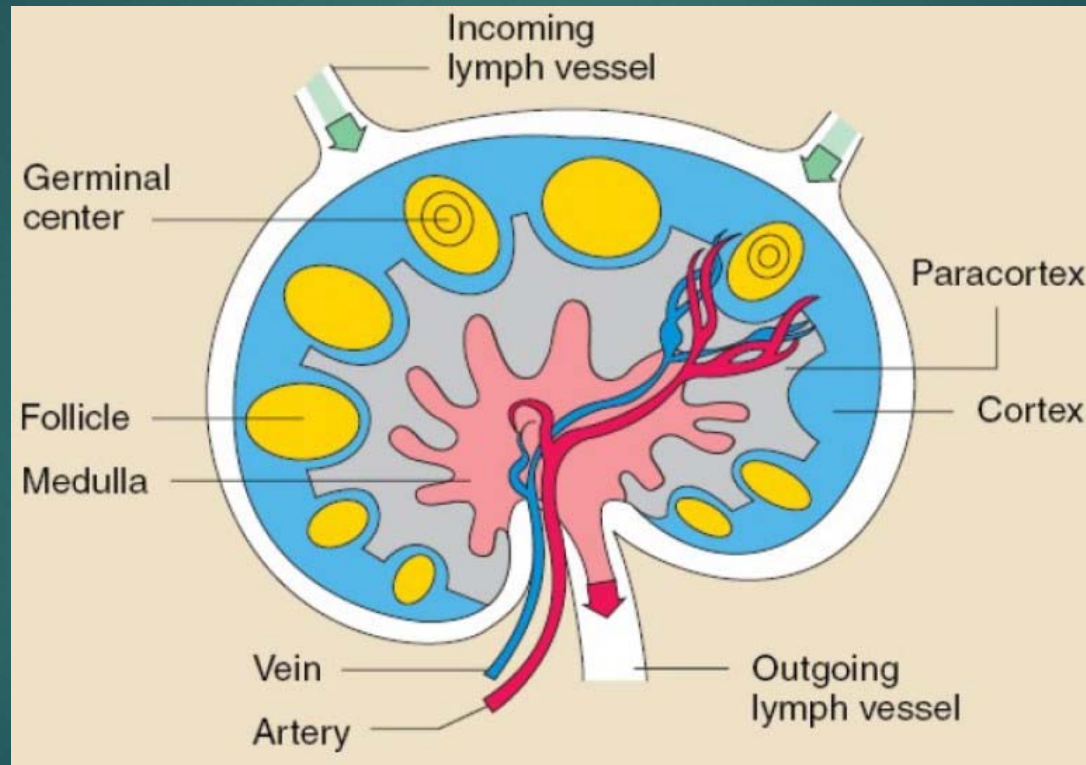
(リンパ節の構造)

輸入リンパ管

胚中心

濾胞
髄質

(B細胞と形質細胞)



旁皮質 (T細胞)

皮質 (B細胞)

輸出リンパ管

Blood Cells (血液系細胞)

Monocytes
(単球)



Lymphocytes
(リンパ球)



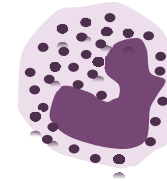
Neutrophils
(好中球)



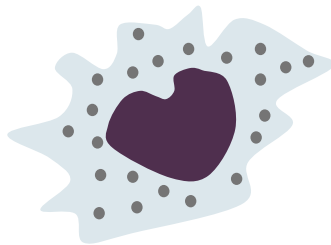
Eosinophils
(好酸球)



Basophils
(好塩基球)



Macrophages
(マクロファージ)



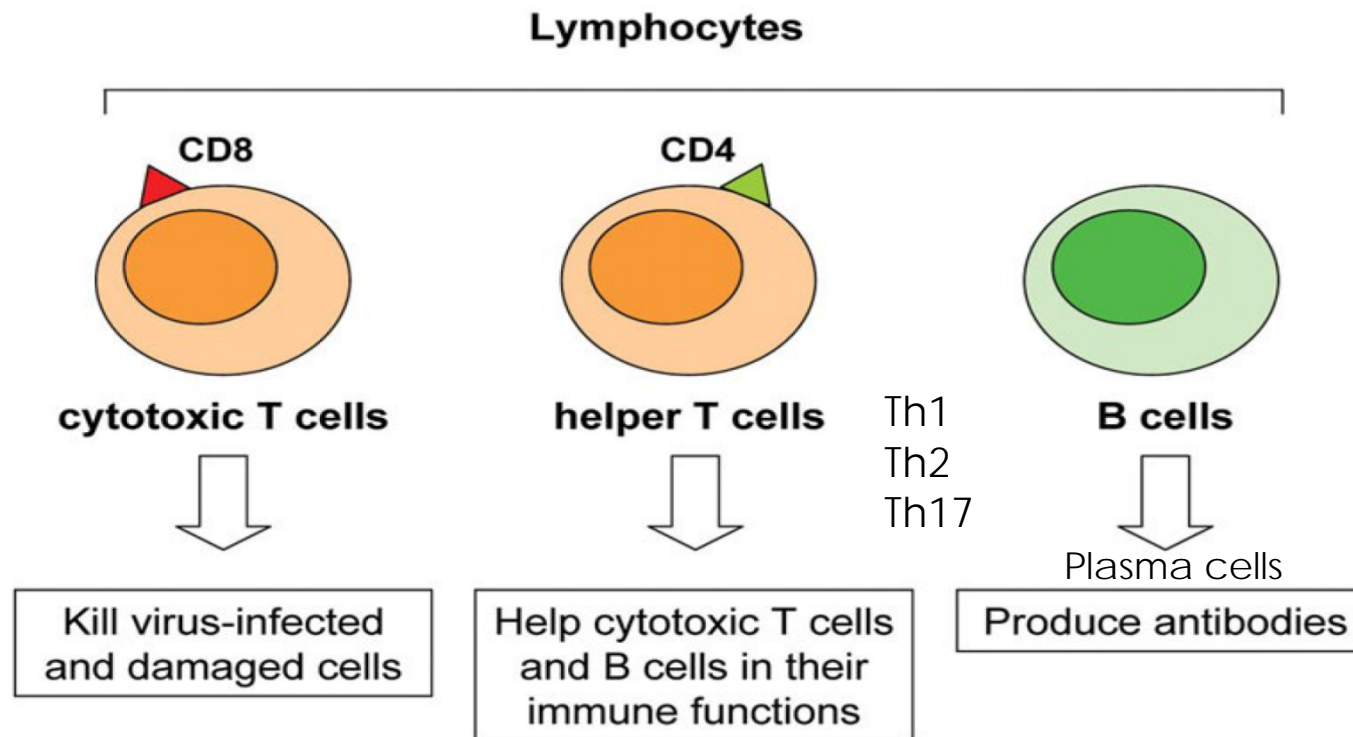
Erythrocytes
(赤血球)



Platelets
(血小板)



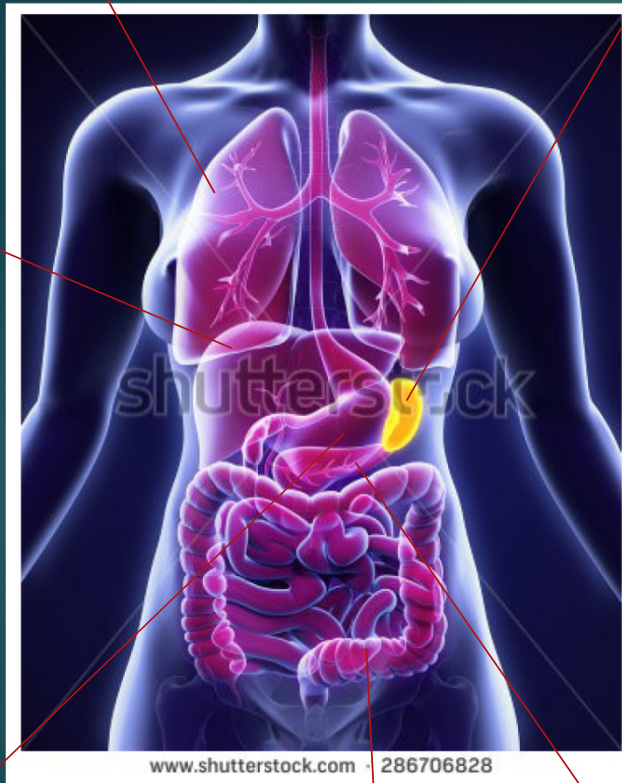
Lymphocytes (リンパ球)



Spleen (脾臓)

Lungs
(肺)

Liver
(肝臓)



Stomach
(胃)

Intestines
(腸)

Pancreas
(膵臓)

Location:

In the upper left corner of the abdominal cavity just under the diaphragm.
(腹腔内左上部の端で横隔膜の直下に位置する。)

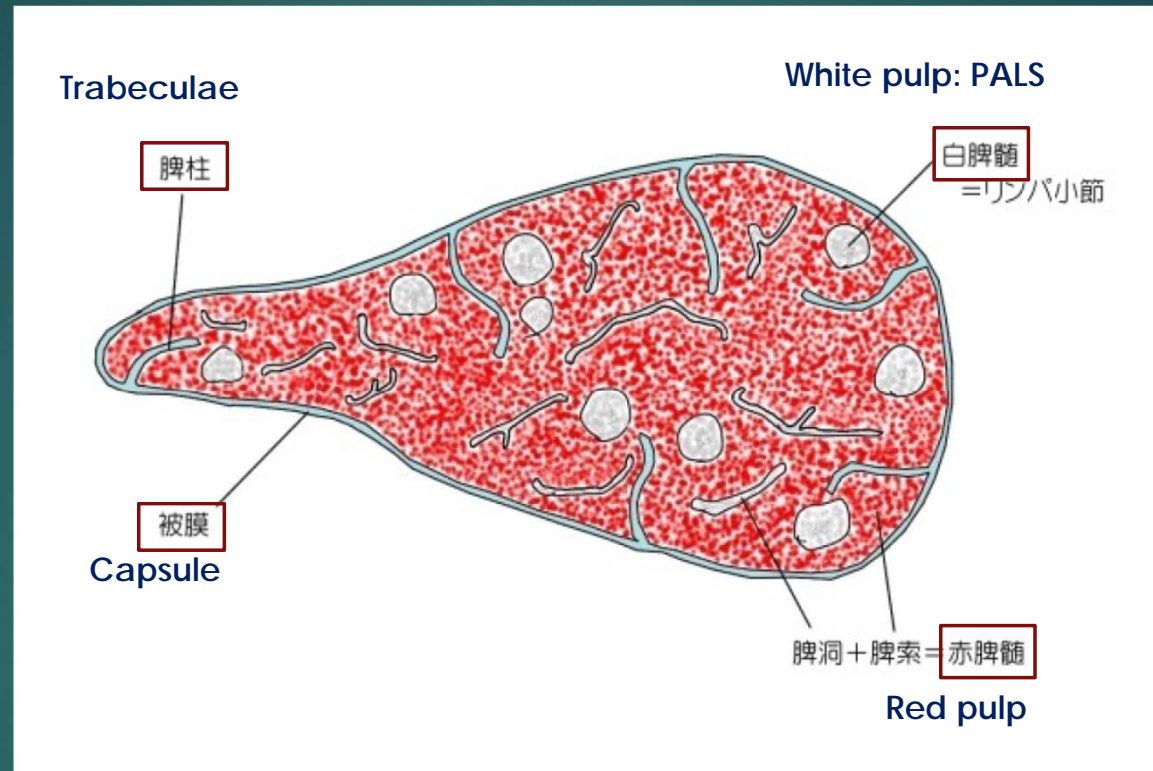
Adjacent organs:

Except for blood vessels and nerves, the spleen connects with no other organs.
(血管と神経以外、周囲の臓器との癒着はない。)

Main functions:

The spleen forms lymphocytes and monocytes and acts as the body's blood bank.
(生体内の血液貯蔵所としてリンパ球や単球をつくる。)

Structure of Spleen (脾臓の構造)



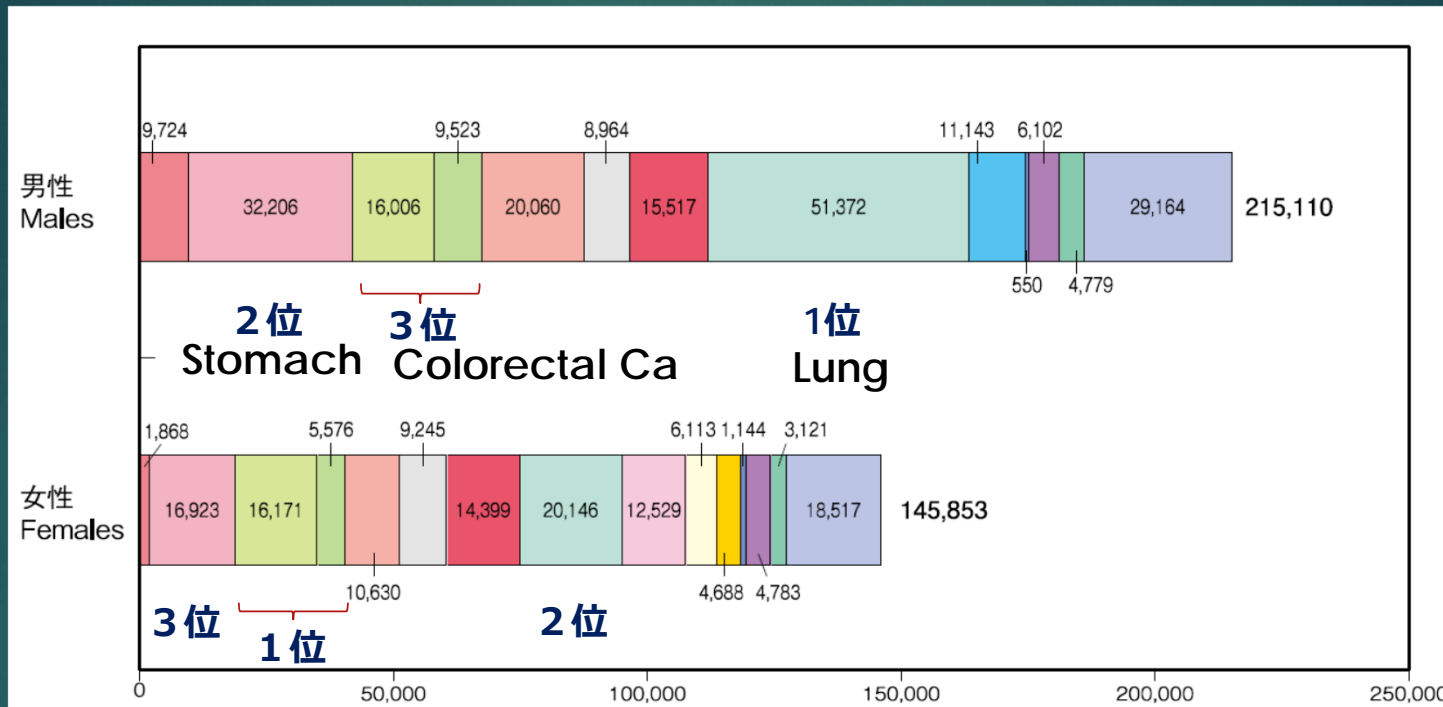
PALS: Periarteriolar Lymphoid Sheets

Questions

Review questions-5

Cancer

- ▶ Cancer: A life-threatening disease that can strike any person at any age.
- ▶ Number of death by cancer site in 2012:



元データ: 人口動態統計によるがん死亡データ/ 独立行政法人国立がん研究センター癌対策情報センター

Treatment of Cancer

Surgery (外科手術)

- ▶ Radical operation (根治手術)
- ▶ Palliative surgery (緩和的外科手術)
- ▶ Reconstructive surgery (再建手術)
- ▶ Preventive surgery (予防手術)



Radiation therapy (放射線療法)

- ▶ Two types of radiation:

 - Electromagnetic rays (電磁波): gamma radiation

 - Particle beams (粒子線): radioactive atoms

- ▶ Pros:

 - Radiation causes cell death by ionizing radiation, which disrupts DNA and interferes with cell replication.

- ▶ Cons:

 - Severe adverse effects: hair loss, erythema, nausea, vomiting

Chemotherapy (化学療法)

- ▶ Used alone or combination with other treatments.
- ▶ Effective against:
 - Leukemia (e.g., Hodgkin's disease)
 - Some solid tumors (e.g., choriocarcinoma) 絨毛癌
- ▶ **Pros:** To cure, to control, or to use as palliative agent.
- ▶ **Cons:** Severe organ-specific adverse effects

Immunotherapy (免疫療法)

- ▶ Treatment to enhance the immune system's response

Cytokine (e.g., IFN gamma)

Antibodies (e.g., anti-CTLA-4, anti-PD1)

Transplantation

Bone marrow transplantation (BMT) 骨髓移植

Peripheral blood stem cell transplantation 幹細胞移植

Cord blood transplantation 臍帶血移植

- ▶ Pros: Remission/complete cure (寛解/完全治癒)

- ▶ Cons: **GVHD** (graft-versus-host disease) 移植片对宿主病

Hormonal therapy (ホルモン療法)

- ▶ Treatment that adds, blocks, or remove hormones

E.g. , Breast cancer: Surgical removal of mammary glands

Tamoxifen: Anti-cancer drug, binds with estrogen receptors (ER) on cancer cells.

Raloxifene: Selective ER modulator (SERM)

Estrogenic actions on bone marrow

Anti-estrogenic actions on breast and uterus

Alternative therapy (代替療法)

▶ Combine traditional/conventional treatments and alternative treatments.

▶ Alternative therapies include:

Biopharmaceutical methods: 新種の化合物

Immune enhancement methods: 免疫賦活剤 (e.g., IL-2, IL-7, G-CSF)

Metabolic methods: 代謝療法 (e.g., special diets, enzymes, nutritional supplements).

Nutritional methods: (e.g., intestinal microflora adjustment)

Herbal medicine: 漢方薬 (e.g., 青黛, 小柴胡湯)

Thank you for your attention!



Any questions? Please contact me at mghmizoguchi@gmail.com