

# **COURSE CURRICULUM**

Immunology for the USMLE STEP 1 Made Easy!

## **Lesson 1: Clinical anatomy of lymphatics organ**

**This lesson will review the following topics:**

- Introduction
- Lymph nodes
- Spleen
- USMLE STYLE Questions

## **Lesson 2: Adaptive vs Innate immunity & B and T cell**

**Adaptive vs Innate immunity & B and T cell This lesson will review the following topics:**

- Introduction
- HLA gene complex and MHC proteins
- Major function of B cells and T cells function and natural killer cells
- T cell development, maturation
- B cell formation and activation
- USMLE STYLE Questions

### **Lesson 3: Immunoglobulins**

**This lesson will review the following topics:**

- Structure and introduction to functions of immunoglobulin
- Immunoglobulin formation and their specificity and diversity
- Functions of IgG and IgM
- Functions of Ig A and IgE and Questions

### **Lesson 4: Complement system and disorders**

**This lesson will review the following topics:**

- Mean, median, and mode
- Introduction and the complement pathways
- Function of complement proteins
- Regulation of complement system and disorders of the complement system
- USMLE STYLE Questions

## **Lesson 5: Cytokines**

**This lesson will review the following topics:**

- Cytokines secreted by macrophages and T cell
- Cytokines secreted by th1 and th2 cells
- Recombinant cytokines and USMLE STYLE questions

## **Lesson 6: Hypersensitivity**

**This lesson will review the following topics:**

- Type I hypersensitivity
- Type II hypersensitivity
- Type III hypersensitivity
- Type IV hypersensitivity
- Questions

## **Lesson 7: Transplant rejection and Treatment**

**This lesson will review the following topics:**

- Hyperacute and Acute transplant rejection
- Chronic transplant rejection

- Graft VS Host disease
- Immunosuppressants in organ transplant rejection
- USMLE STYLE Questions

## **Lesson 8: Congenital immunodeficiency disorders**

**This lesson will review the following topics:**

- Hyperacute and Acute transplant rejection
- B cell disorders:  
Bruton's agammaglobulinemia
- B cell disorders:  
Selective IgA deficiency
- B cell disorders:  
CVID
- T cell disorders like DiGeorges syndrome, Autosomal dominant hyperimmunoglobulin E syndrome, IL-12 receptor deficiency, Chronic mucocutaneous candidiasis
- B and T cell disorders like Severe combined immunodeficiency, Wiskott-Aldrich syndrome (WAS), Hyper-IgM syndrome, Ataxia telangiectasia
- Phagocyte dysfunction like Leukocyte adhesion deficiency (type 1), Chédiak-Higashi syndrome, Chronic granulomatous disease

## **Lesson 9: Blood transfusion reactions**

**This lesson will review the following topics:**

- Type I hypersensitivity
- Acute hemolytic transfusion reaction
- Anaphylactic transfusion reaction
- Febrile nonhemolytic transfusion reaction
- TRALI vs TACO
- Delayed hemolytic transfusion
- USMLE STYLE Questions