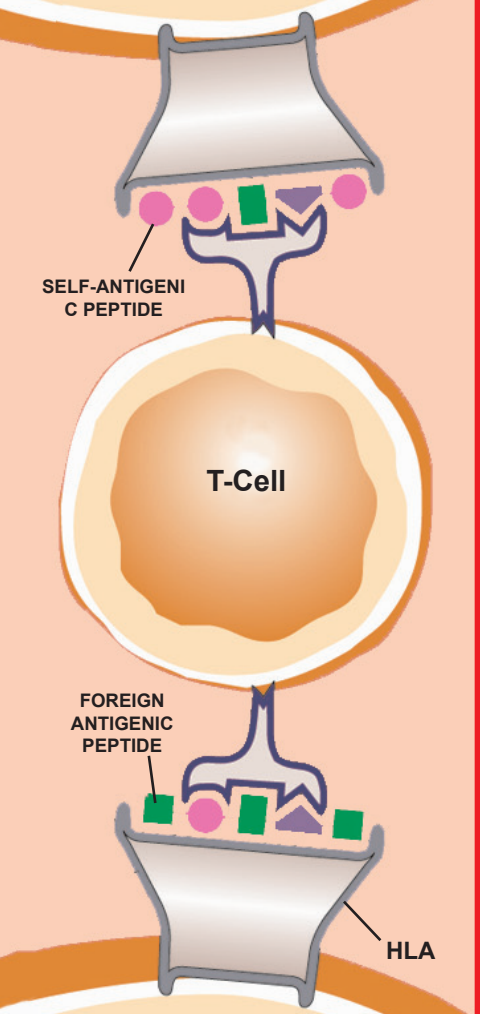

2010 AUTOIMMUNE PROFILE - BASIC

- Anti-Nuclear Antibody (ANA)
- Rheumatoid Factor
- C1Q Immune Complex

2011 AUTOIMMUNE PROFILE (COMPREHENSIVE)

- Anti-Nuclear Antibody (ANA)
- Extractable Nuclear Antigen (ENA) antibody
- Double-Stranded DNA (dsDNA) Antibody
- Rheumatoid Factor
- C1Q Immune Complex
- Actin (Smooth Muscle) Antibody
- Mitochondrial Antibody

2013 AUTOIMMUNE LIVER DISEASE

- Actin (Smooth Muscle) Antibody
- Mitochondrial Antibody

Specimen requirement:
2 mL Serum

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AUTOIMMUNE PANELS

Recommended for patients with possible viral infections and autoimmune disorders.

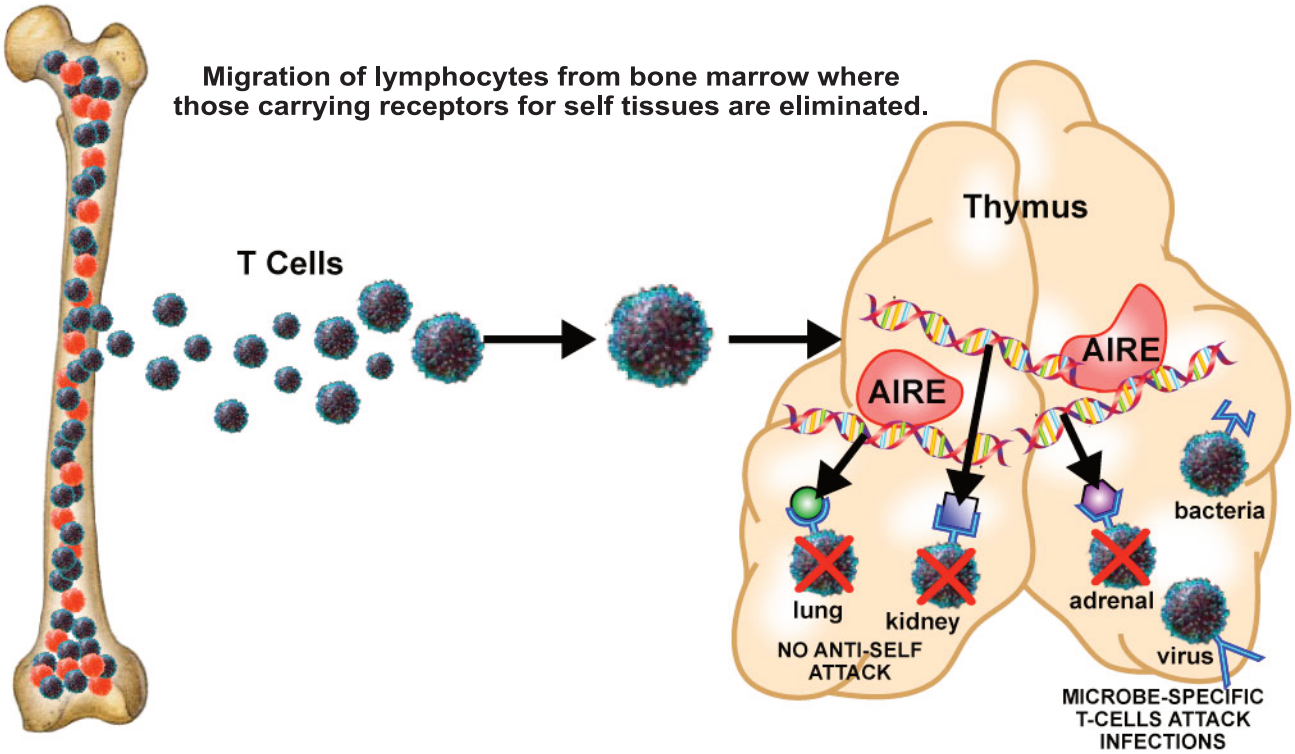
There are more than 80 types of autoimmune diseases identified to date. Many of these disorders share similar symptoms, making it difficult for the health care practitioner to pinpoint the autoimmune condition. Diagnosing an autoimmune disease can be a monumentally time-consuming, exasperating task. The initial symptoms of autoimmunity may include fatigue, aching tendons or muscles, inflammation and low fever. Many patients are not diagnosed until these innocuous symptoms manifest into clinical complaints and sub-optimal health.

Diagnosis of Autoimmune Diseases

Diagnosis of autoimmune disorders is based on serological assays such as ANA, RF, ENA and immune complexes. Detection of other autoantibodies can be employed for more specific determination of autoimmune diseases such as double-stranded DNA antibody elevation in lupus erythematosus, citrullinated peptide antibody in rheumatoid arthritis, actin and mitochondrial antibody detection in autoimmune liver disease. Furthermore, autoantibodies can determine the progress of the disease and whether or not therapy implementation has been effective.

Key Concepts

- Autoimmunity is a misdirected immune response
- About 30 million Americans suffer from autoimmune disease
- Genetic susceptibility plus environmental factors play a role in the development of autoimmunity
- These are examples of environmental factors:
  - Infections
    - EBV, CMV, HSV 1 & 2, VZV, Rubeola
  - Chemicals
    - Pharmaceuticals, cigarette smoke and others
  - Dietary proteins and peptides
    - Gliadin, casein, modified food antigens
- Specific determination of autoimmune disease can be facilitated through measurements of ANA, ENA, dsDNA, RF, actin, mitochondrial, citrullinated peptide antibodies, and immune complexes
- Levels of autoantibodies can be used to determine progression of the disease and the effectiveness of therapy
- Treatments for autoimmunity may include anti-inflammatories, IVIG, dietary manipulation, and others.



The role of bone marrow and the thymus gland in the regulation of the immune system and the prevention of autoimmune disease. In people with autoimmune disease such as autoimmune polyendocrinopathy candidiasis – ectodermal dystrophy syndrome (APECED), due to a deficiency or malfunction in the AIRE gene, some organ-specific proteins are not expressed on the T cells in the thymus. This allows self-reactive T cells to escape into the body, where they eventually attack the organs in which their target proteins occur, resulting in antibody production against different tissue antigens.

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