

The Spleen

Definition

The spleen is a lymphoid organ located in the upper left quadrant of the abdomen. It is approximately the size of a clenched fist and functions in blood filtration and immune defense.

Functions

- Removal of old and damaged red blood cells
- Filtration of blood-borne pathogens
- Participation in immune responses
 - Cell-mediated immunity
 - Humoral immunity

Anatomical Position

- Located in the left hypochondriac region
- Lies beneath the diaphragm and behind the stomach
- Protected by the left rib cage
- Normally not palpable unless enlarged (splenomegaly)
- Classified as an intraperitoneal organ

- Covered by peritoneum except at the splenic hilum

Peritoneal Ligaments

The spleen is connected to surrounding organs by peritoneal ligaments:

- Gastrosplenic ligament
 - Connects spleen to the greater curvature of the stomach
 - Contains short gastric and left gastroepiploic vessels
- Splenorenal ligament
 - Connects spleen to the left kidney
 - Contains the splenic vessels and tail of the pancreas
- The space between these ligaments contributes to the lesser sac

External Structure

- Covered by a thin fibrous capsule
- Has a curved, wedge-shaped appearance

Surfaces

- Diaphragmatic surface
 - Smooth and convex
 - In contact with diaphragm and ribs

- Visceral surface
 - Irregular
 - Related to stomach, left kidney, and colon

Borders

- Superior
- Inferior
- Anterior (contains characteristic notches)
- Posterior

The anterior notches become palpable in splenomegaly.

Blood Supply

Arterial Supply

- Supplied by the splenic artery
- Originates from the coeliac trunk
- Travels along the superior border of the pancreas
- Divides into segmental end arteries at the splenic hilum
- Minimal anastomosis allows subtotal splenectomy

Venous Drainage

- Drained by the splenic vein

- Joins the superior mesenteric vein
- Forms the hepatic portal vein

Clinical Importance

- Splenomegaly causes inferomedial enlargement
- Highly vascular organ → risk of severe hemorrhage if injured