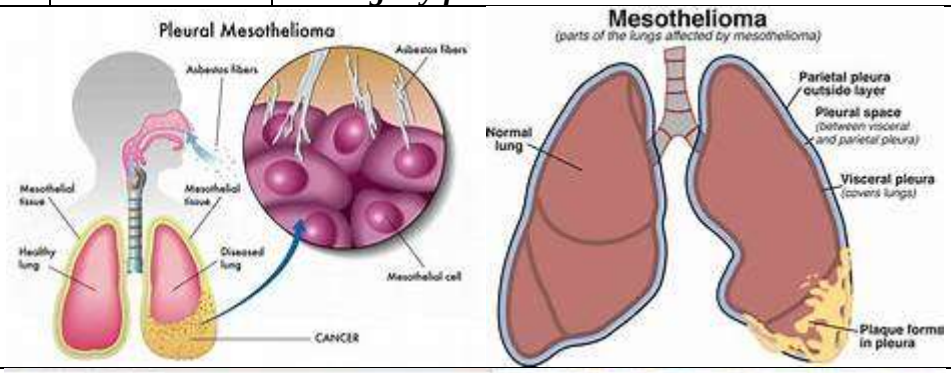
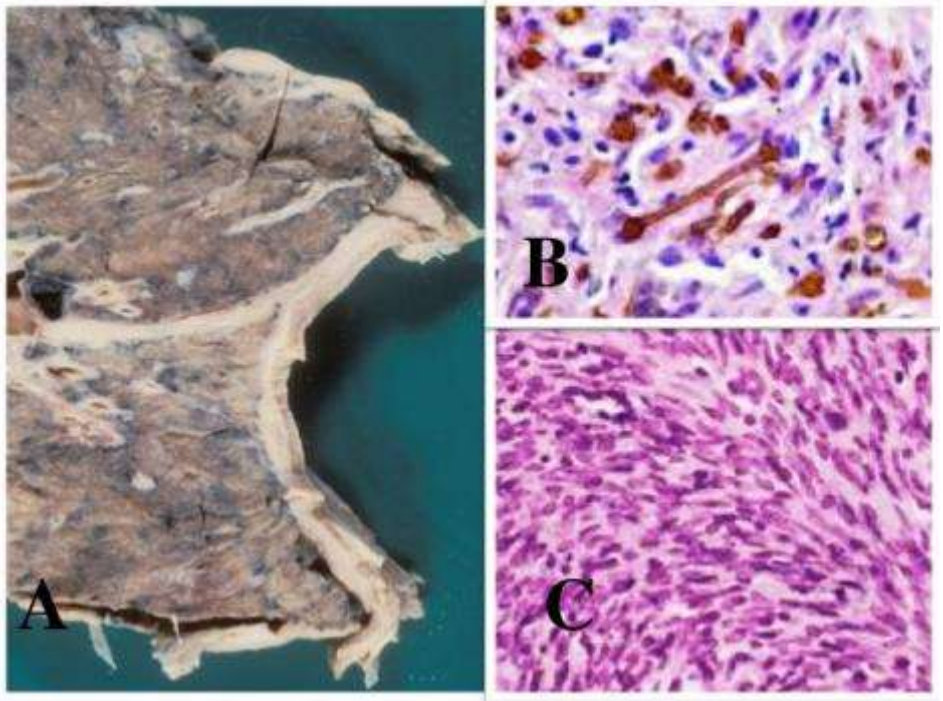
XVIII. Diseases of Liver, G. Bladder, Pancreas & Peritoneum

Peritoneum

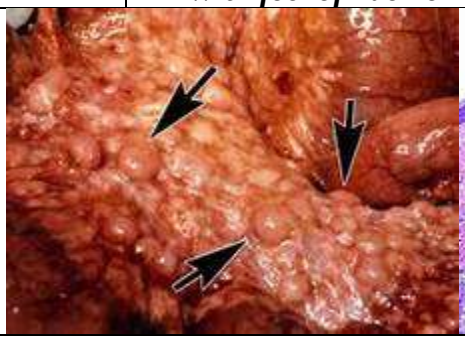
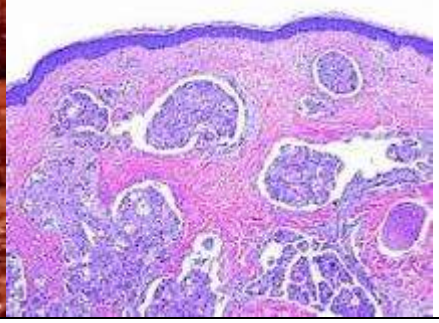
Mesothelioma		
A piece of omentum		• *Shows a tumour*
The tumour:		• *Is formed of numerous masses*
	Masses:	• *Are small in size (0.1-0.5 cm. each)* • *Variable in shape (and distribution)* • *Irregular (somewhat nodular or rather flat)* • *Whitish-greyish in colour* • *Slightly firm in consistence*





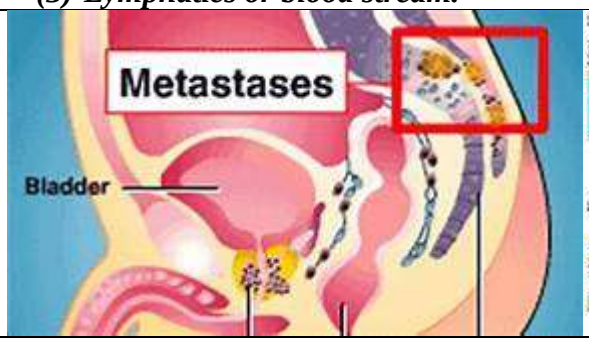
Metastatic Tumours

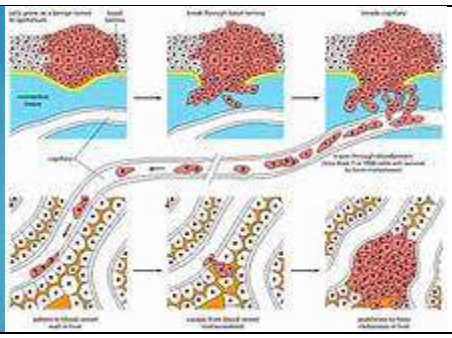
The omental tissue:	• ***Is shrunken in parts; thickened in other parts*** • ***Nodular***
Nodules:	• ***Are irregularly scattered in the omental tissue*** • ***Multiple*** • ***Small (majority)*** • ***Large (or variable in size and shape; some)*** • ***Raised over the surface*** • ***With foci of haemorrhage***

N.B.I: Secondary tumours in the peritoneum may reach it by

(1) Direct extension (from an organ covered by it),
(2) Superficial dissemination (ovarian or pancreatic carcinoma),
(3) Lymphatics or blood stream.



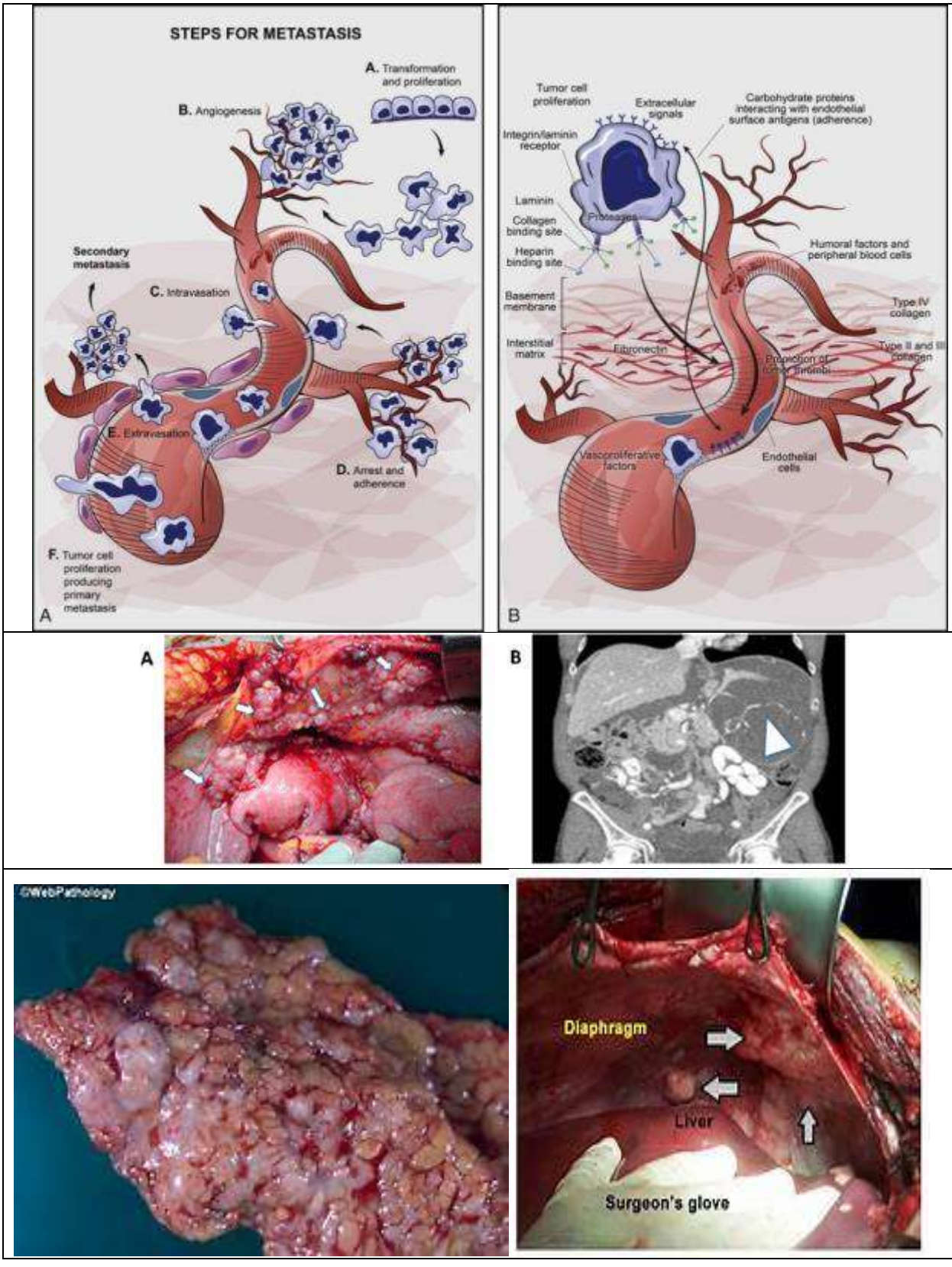


N.B.2:
Retro-peritoneal tumours all

- ***Tumours growing from the connective tissue particularly that behind the peritoneum of the posterior abdominal wall:***

(a) Benign: Lipoma, fibroma, neuroma and angioma.
(b) Malignant: Lymphoma and sarcoma.

1. ***Retroperitoneal lipoma (teratomatous rather than innocent lipomatous). Extensions, adhesions and recurrence after removal are some characteristic features.***
2. ***Retroperitoneal sarcoma (a fibrosarcoma or round-cell sarcoma). Occurs at middle age; is a soft, pinkish-white area of haemorrhage or cyst formation.***


STEPS FOR METASTASIS
A. Transformation and proliferation
B. Angiogenesis
Secondary metastasis
C. Intravasation
E. Extravasation
D. Arrest and adherence
F. Tumor cell proliferation producing primary metastasis
A
Tumor cell proliferation
Extracellular signals
Carbohydrate proteins interacting with endothelial surface antigens (adherence)
Integrin/laminin receptor
Laminin
Collagen binding site
Heparin binding site
Proteases
Humoral factors and peripheral blood cells
Basement membrane
Type IV collagen
Interstitial matrix
Fibronectin
Type II and III collagen
Vasoproliferative factors
Endothelial cells
B

A

B

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Diaphragm
Liver
Surgeon's glove

N.B.4:

Accumulation of serous, non-purulent fluid in the peritoneal cavity = ascites may be a transudate (dropsically) or exudate (inflammatory).

I. Dropsical ascites may be due to:

1. General causes

(Cardiac failure, renal disease (such as nephrosis and nephritis) and nutritional disorders with marked deficiency in proteins).

2. Local causes:

(a) Portal obstruction (obstruction of the portal vein, portal cirrhosis of the liver, chronic venous congestion and syphilis) and pressure by enlarged lymph nodes as by tuberculosis. Lymphoma and tumours.

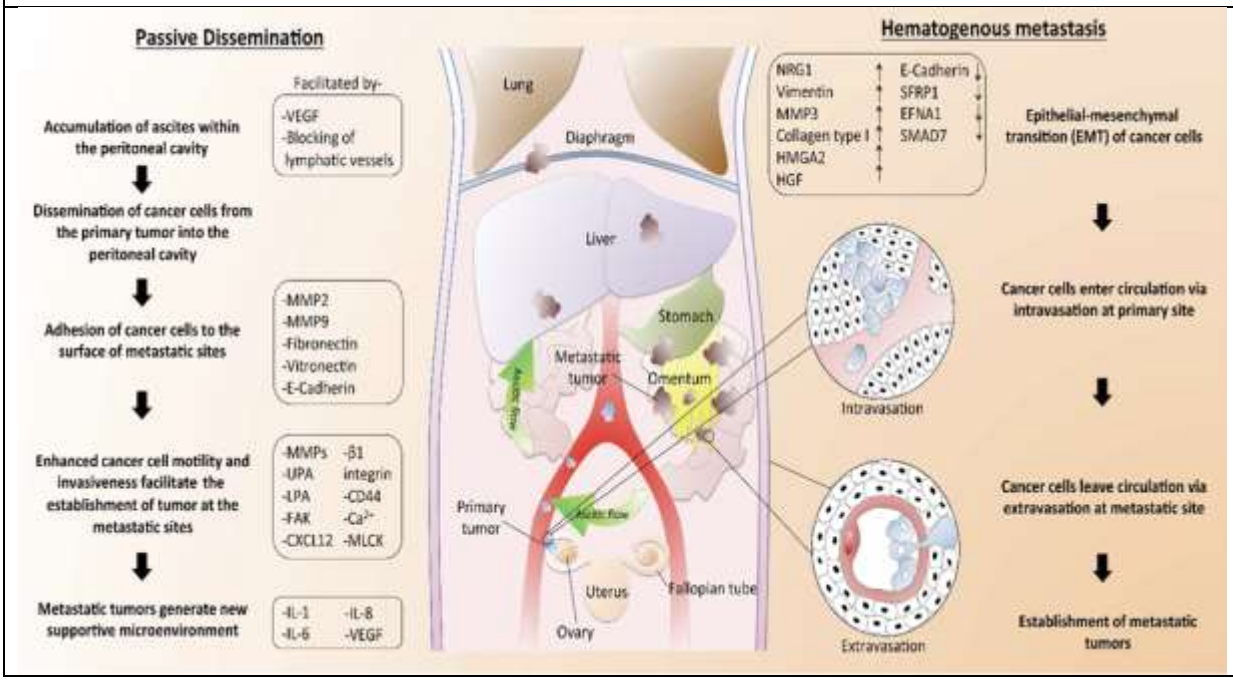
(b) Chronic tuberculous peritonitis; hydatid cyst.

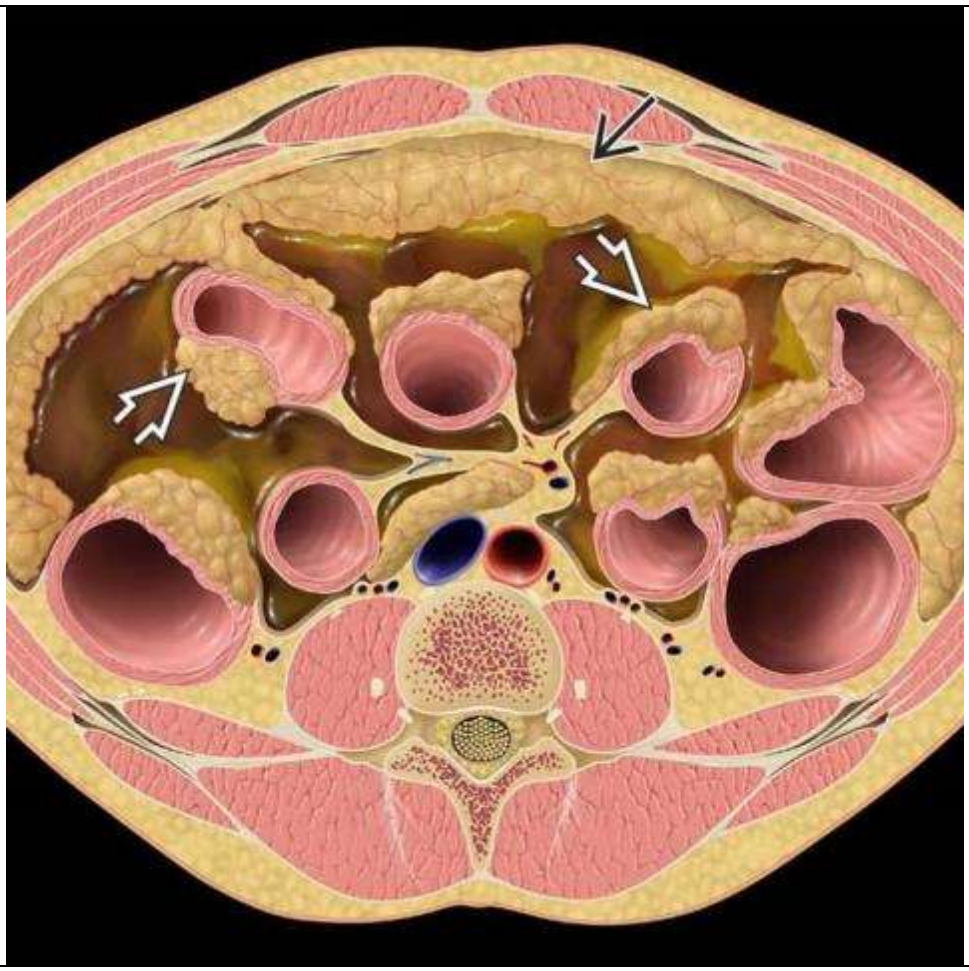
(c) Thrombosis of portal vein and

(d) Neoplasms.

The ascetic transudate is a

- ***Fluid of low specific gravity (1.015) and***
- ***Low protein content (2%).***





II. Exudative ascites:

Is caused by:

(a) Irritation of the peritoneum by the moist form of tuberculosis,
(b) Carcinoma of liver or of ovaries and
(c) Metastases in the peritoneum.

The exudative fluid

- ***Is of a higher specific gravity (1.018),***
- ***Of a protein-content above 3% and***
- ***With more cellular content.***

The fluid may be

Haemorrhagic in

- ***Tuberculosis,***
- ***Tumours and***
- ***Occasionally with tubal pregnancy and***
- ***Cirrhosis.***

It is opalescent in

- ***True chylous ascites (due to filariasis obstructing the thoracic duct and lymphatics) or***
- ***Is pseudo-chylous due to lipoids.***

Clinically,

- ***Abdominal enlargement,***
- ***Pressure symptoms and***
- ***Special signs (shifting dullness, fluid thrill and portal peripheral anastomosis) are characteristic.***