UNDERGRADUATE PATHOLOGY PRACTICAL EXAMINATION
OSMANIA MEDICAL COLLEGE, HYD

QUESTIONNAIRE **DURATION : 3 HRS**

* 45 year old female patient admitted in a Comatose condition her blood sugar is 400mg%. Examine the given sample of urine and report for two abnormal constituents.

* Estimate the Hb% in the given sample of blood.

* Stain the given peripheral smear and give your opinion

UNDERGRADUATE PATHOLOGY PRACTICAL EXAMINATION
OSMANIA MEDICAL COLLEGE,HYD

QUESTIONNAIRE DURATION : 3 HRS

1. 35 Years old male complaining of fever, loss of appetite, passing high colored urine. On examination there is yellowish discoloration of the sclera. Examine the given sample of urine for two relevant abnormal constituents.

2. Find out the blood groups &typing of the given sample of blood

3. * Stain given peripheral smear and give your opinion

UNDERGRADUATE PATHOLOGY PRACTICAL EXAMINATION
OSMANIA MEDICAL COLLEGE, HYD

QUESTIONNAIRE **DURATION : 3 HRS**

* 10years old male child with history of puffiness of the face, burning micturition, oliguria and fever. Examine the given sample of urine and report two abnormal constituents.

* Estimate the Hb% in the given sample of blood.

* Stain the given peripheral smear and give your opinion

UNDERGRADUATE PATHOLOGY PRACTICAL EXAMINATION
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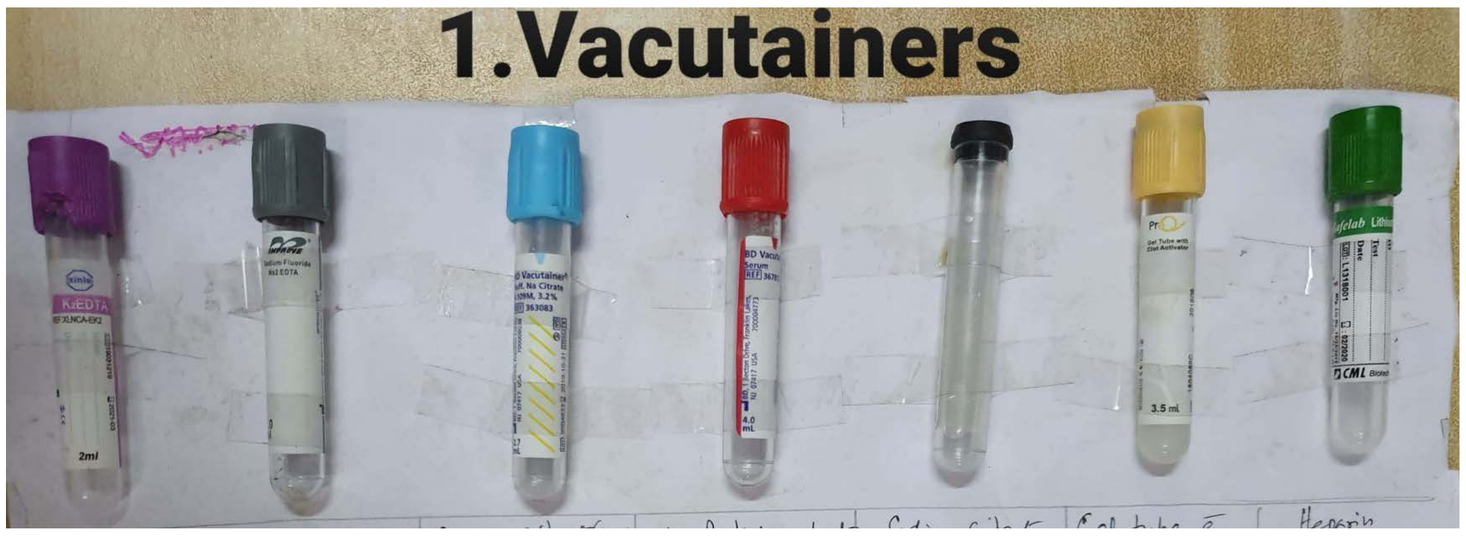
QUESTIONNAIRE **DURATION : 3 HRS**

* 35years old male complaining of fever, loss of appetite, passing high coloured urine. On examination there is yellowish discoloration of the sclera. Examine the given sample of urine for two relevant abnormal constituents.

* Calculate the total WBC count in the given sample of blood using manual method.

* Stain given peripheral smear and give your opinion



VACUTAINERS

1) IT IS BLOOD COLLECTION TUBE STERILE GLASS OR PLASTIC TUBE, WITH A CLOSURE THAT IS EVACUATED TO CREATE A VACUUM INSIDE THE TUBE FACILITATING THE DRAW OF A PREDETERMINED VOLUME OF BLOOD.

2) THEY CONTAIN ADDITIVES – ANTICOAGULANTS

3) EACH TUBE CONTAINS DIFFERENT COLOURED TOPS.

A] RED TOP : NO ADDITIVE IN GLASS TUBE

USE : TESTS USING SERUM LIKE BLOOD CHEMISTRY, AIDS, ANTIBODY VIRAL STUDIES, LFT, RFT.

B] BLUE TOP : SODIUM CITRATE ADDITIVE

USE : COAGULATION STUDIES, PT, APTT, INR.

C] LAVENDER TOP : EDTA ADDITIVE

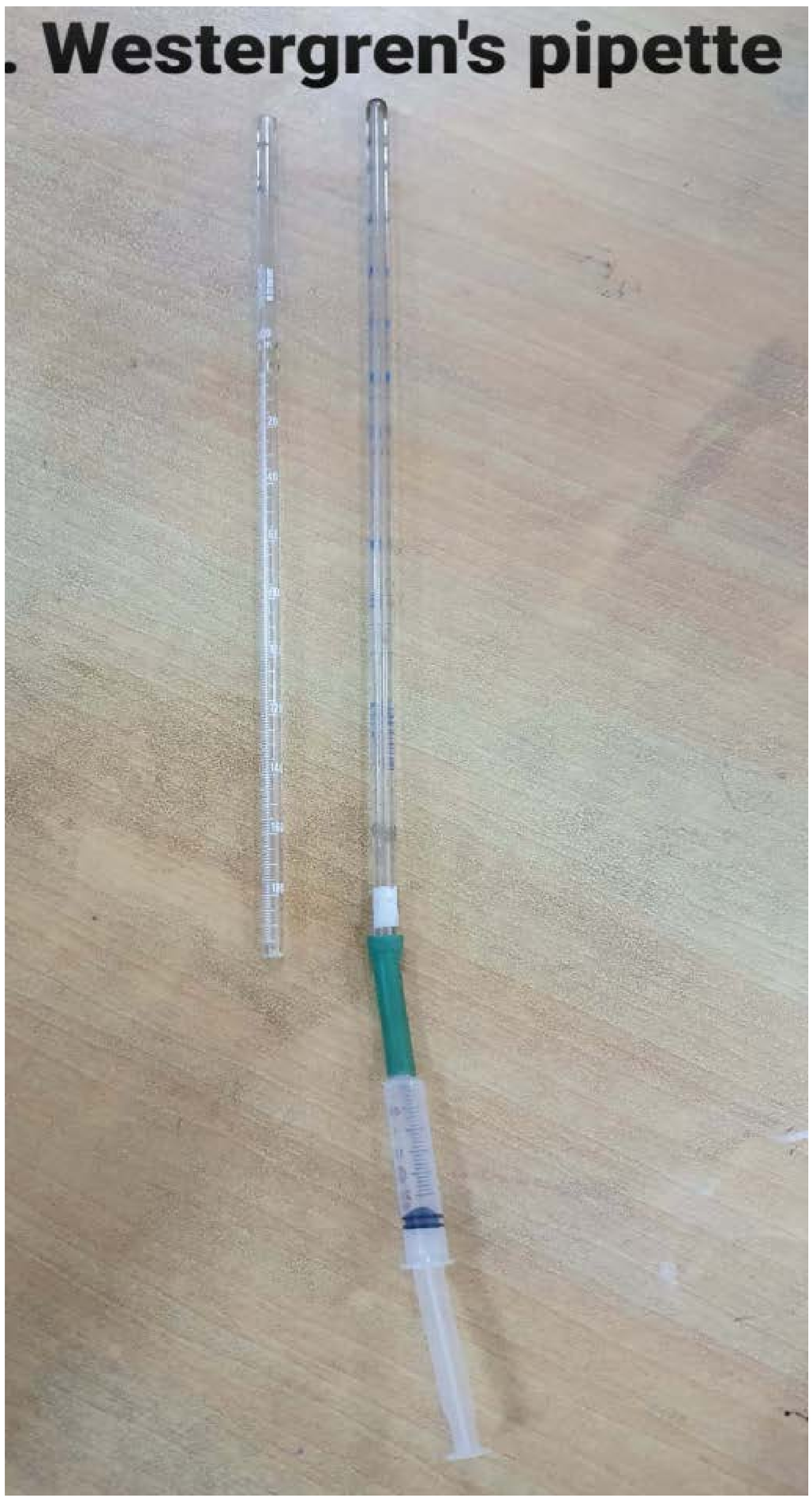
USE : CBC, WBC, Hb, PCV, PLATELET COUNT.

D] GREEN TOP : HEPARIN ADDITIVE

USE : PLASMA SEPARATION TUBE

E] GREY TOP : POTASSIUM OXALATE & NaF-ADDITIVE

USE : GLUCOSE, BLOOD ALCOHOL, LACTIC ACID LEVEL ESTIMATION



WINTROBE'S PCV TUBE

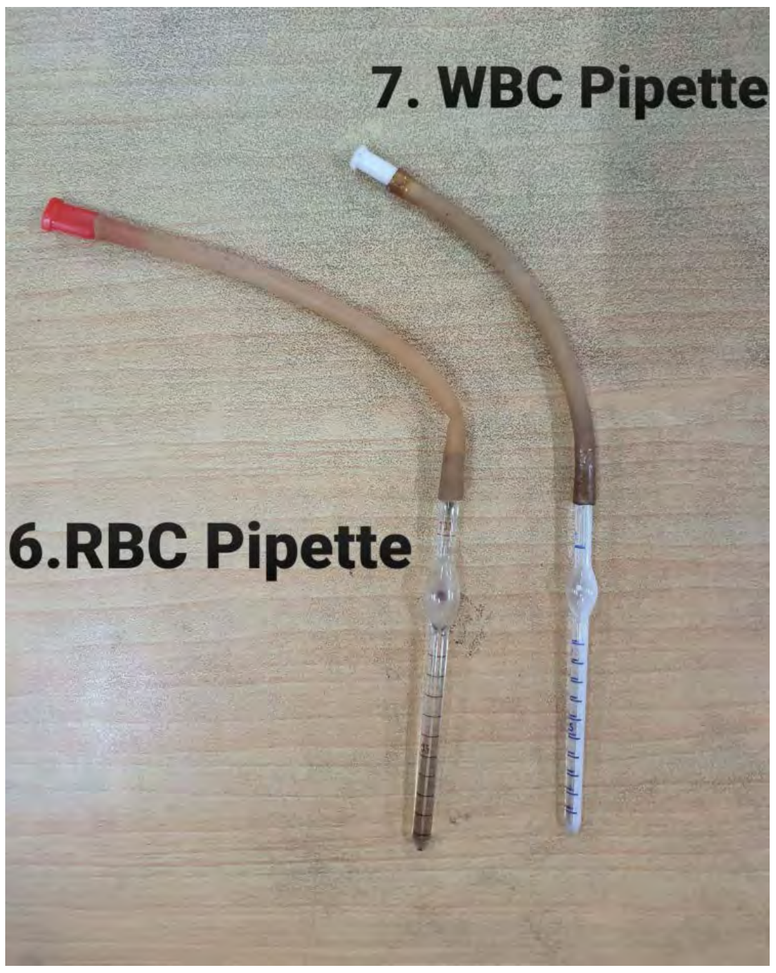
1) GLASS TUBE MEASURING 11CMS LONG, WITH AN INTERNAL DIAMETER = 2.5mm, WITH A FLAT BOTTOM.
2) MARKINGS ARE AT 1MM INTERVAL FROM 0-110 MM
3) ZERO MARK IS SEEN AT THE BOTTOM.
4) HOLDS 1ML OF BLOOD & FILLS UPTO '100' MARK USING PASTEUR PIPPETTE.
5) VENOUS BLOOD ANTICOAGULATED WITH EDTA OR DOUBLE OXALATE (CONTAINS 3 PARTS AMMONIUM OXALATE + 2 PARTS OF POTASSIUM OXALATE)

USE: ESTIMATE PACKED CELL VOLUME (PCV) AND ESR ALSO

WESTERGREN'S ESR TUBE

1) SPECIAL TUBE OPEN AT BOTH ENDS.
2) LENGTH = 30cms, WITH A INTERNAL DIAMETER = 2.5mm
3) TUBE IS CALIBRATED IN MM INTERVAL AND MARKED AS 10mm, 20mm, 30mm UPTO 200mm FROM ABOVE DOWNWARDS.
4) ZERO MARK IS SEEN AT THE TOP.
5) ANTICOAGULANT USED IS 0.4ml OF 3.8% SODIUM CITRATE
6) 0.4ml OF ANTICOAGULANT AND 1.6mL OF BLOOD IS MIXED i.e RATIO OF ANTICOAGULANT TO BLOOD IS 1:4

USE: FOR MEASURING ERYTHROCYTE SEDIMENTATION RATE (ESR)


7. WBC Pipette
6.RBC Pipette

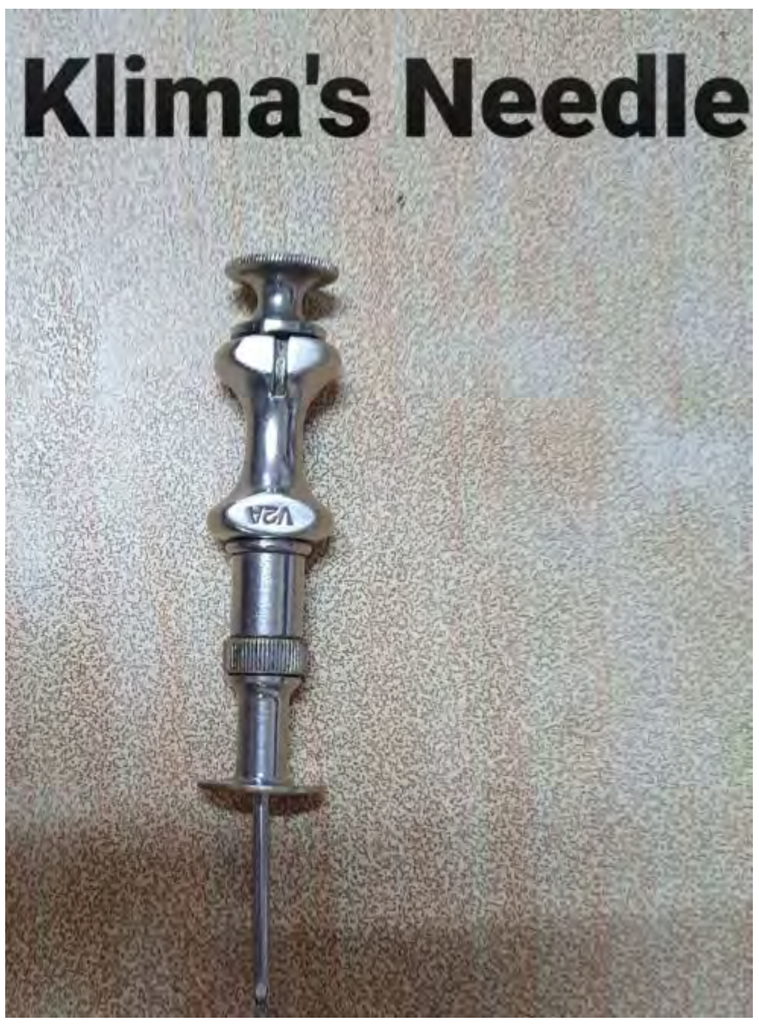

Pasteur Pipette


. Tissue Cassette

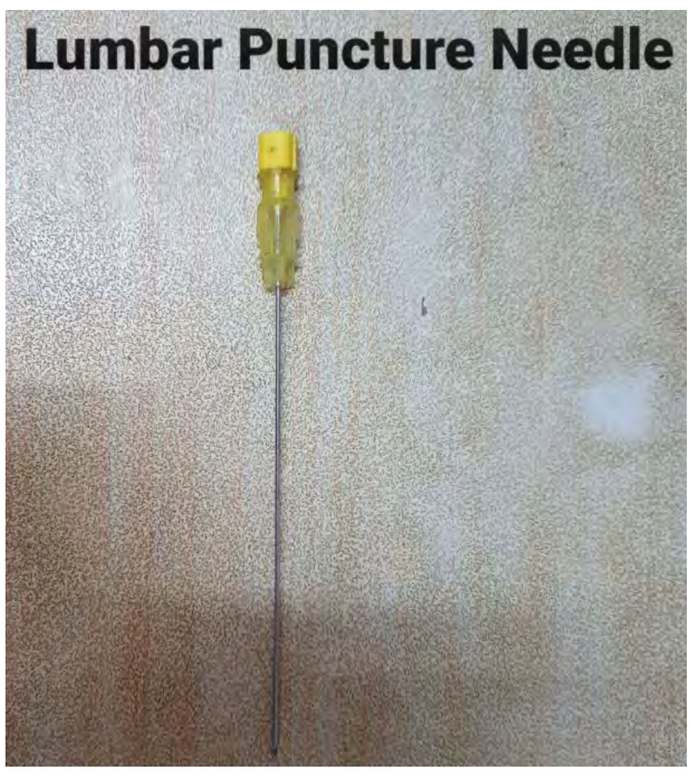

Paraffin Block


Leukart's L Mould


. Salah Bone Marrow
Aspiration Needle


Klima's Needle


20. Bone Marrow
Biopsy Needle

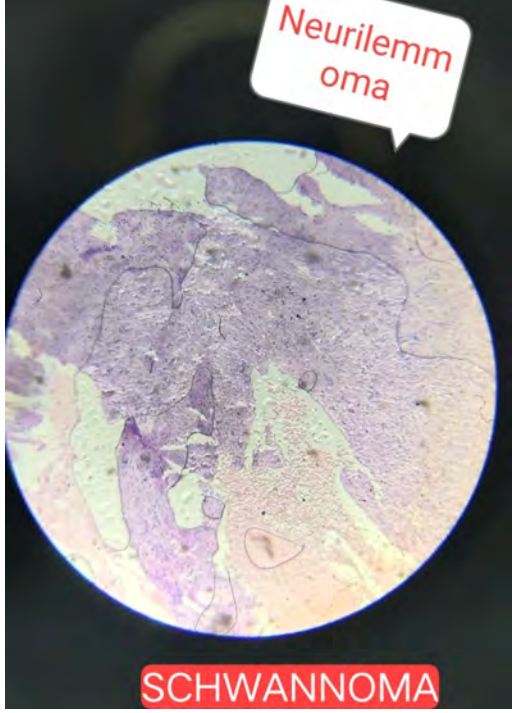

Lumbar Puncture Needle

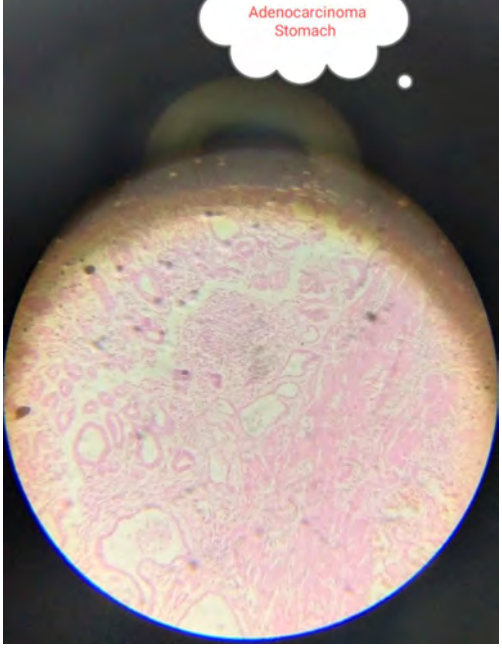

22. Vim Silverman
Liver Biopsy Needle

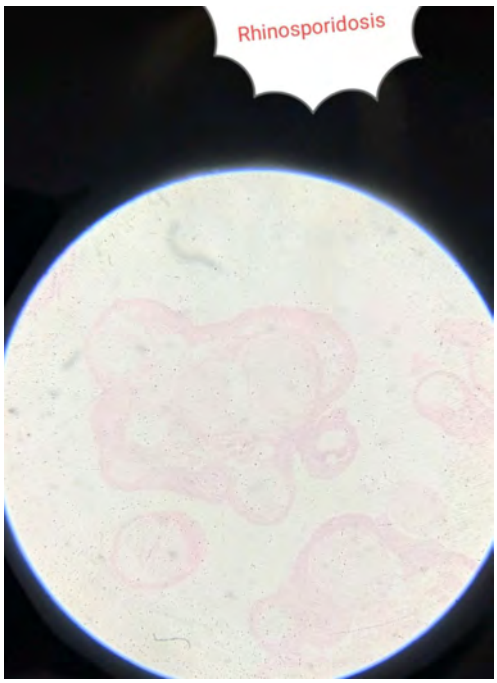

Squibb's Urinometer

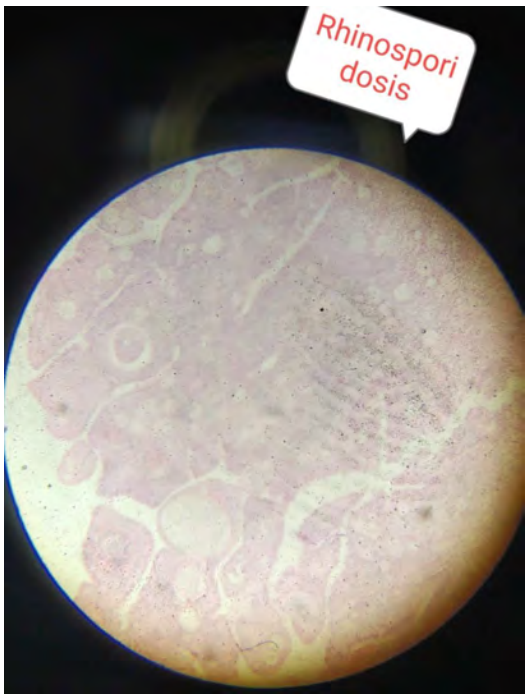

24. Esbach's Albuminometer


Lipoma

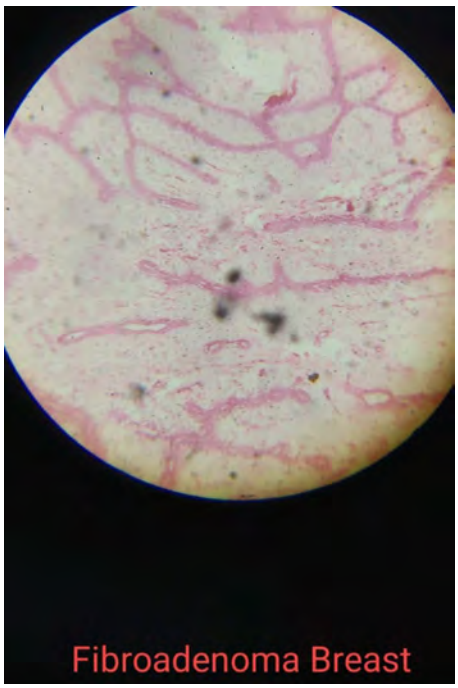

Neurilemm
oma
SCHWANNOMA

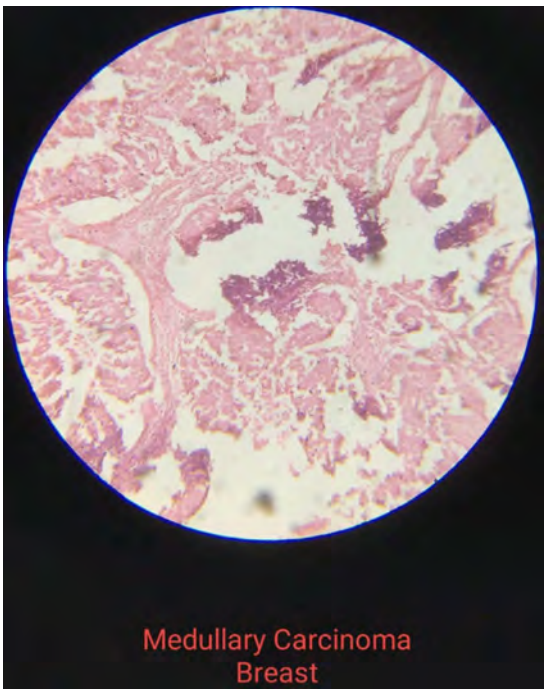

Adenocarcinoma
Stomach


Rhinosporidosis

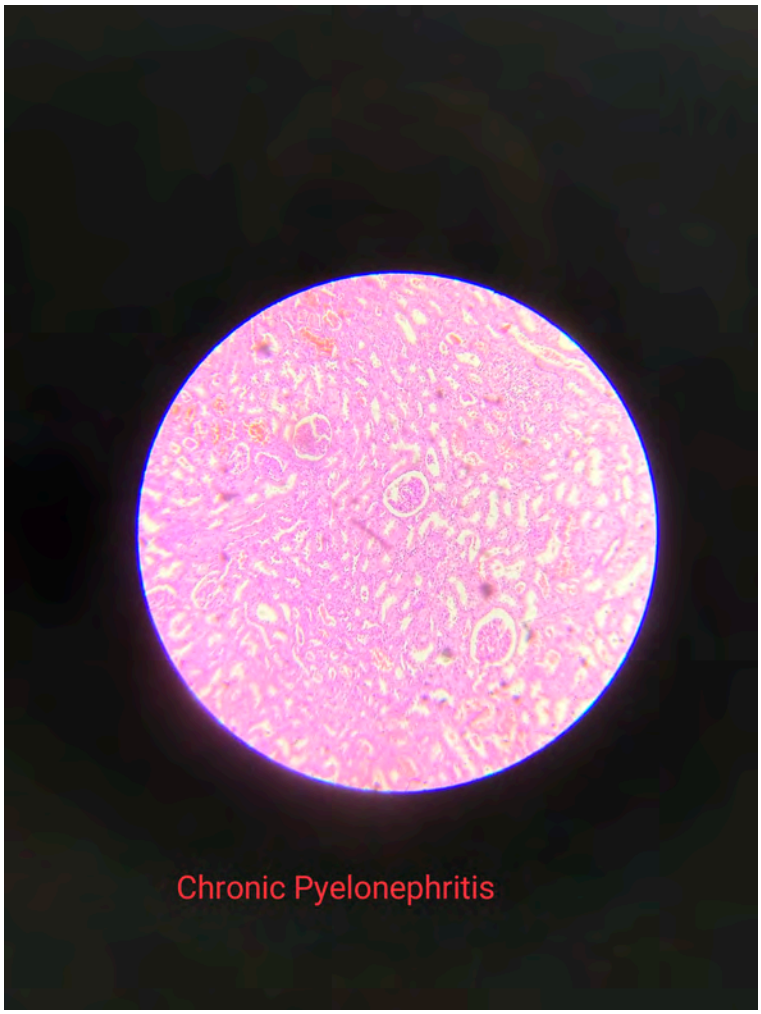

Rhinospori
dosis

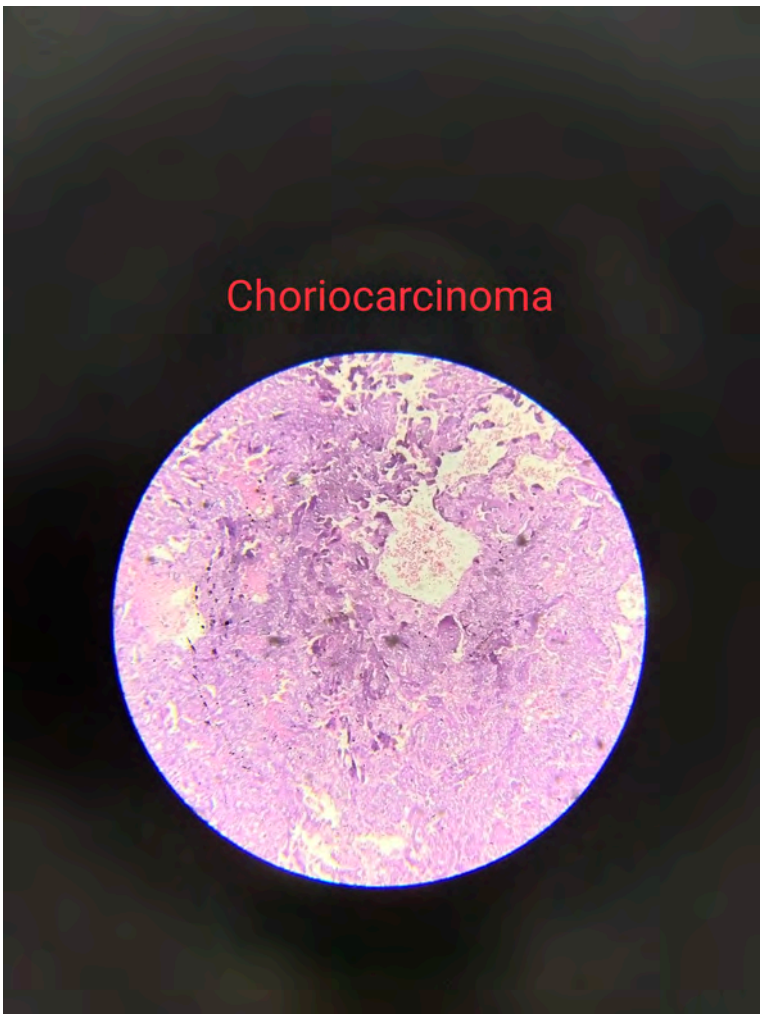

Squamous Papilloma

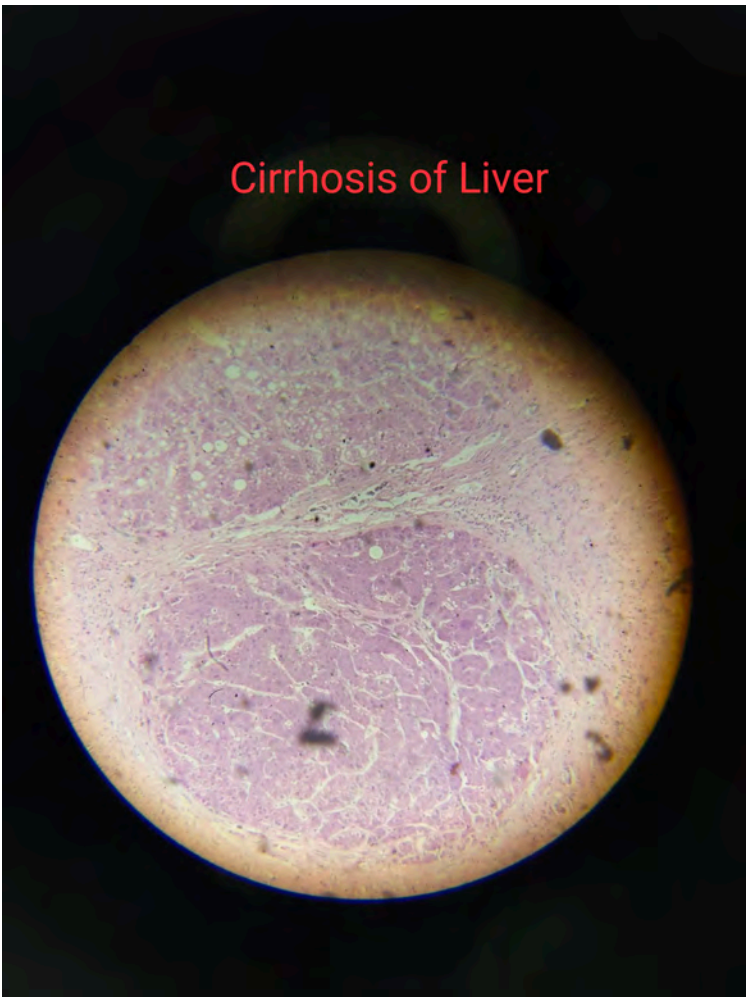

Fibroadenoma Breast

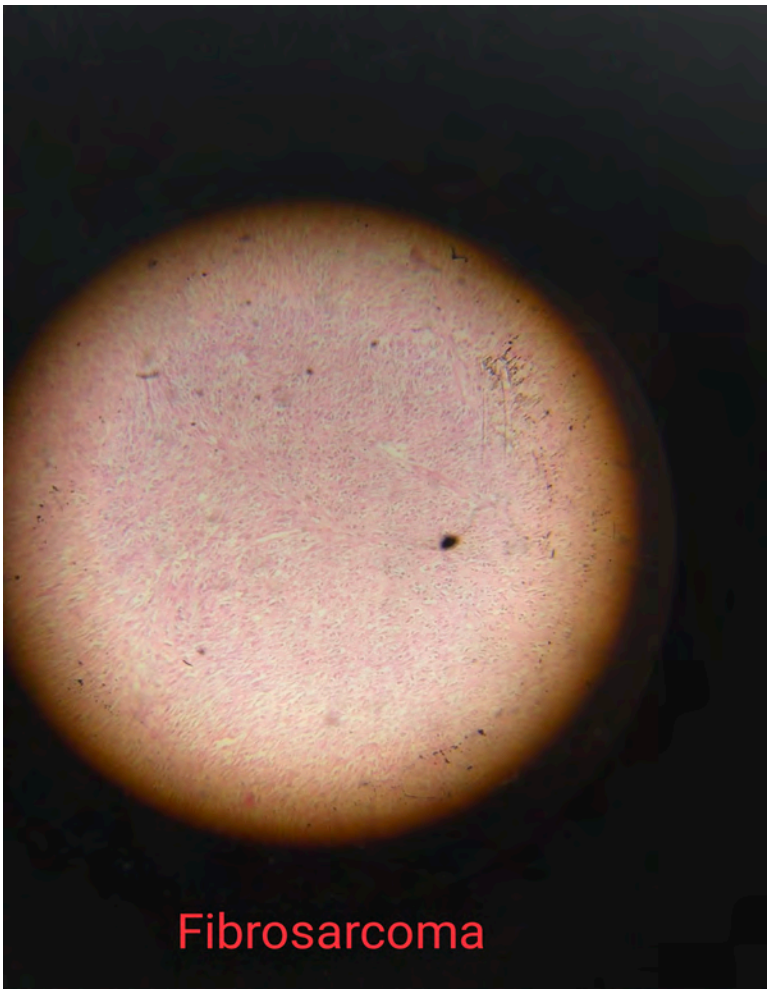

Medullary Carcinoma
Breast

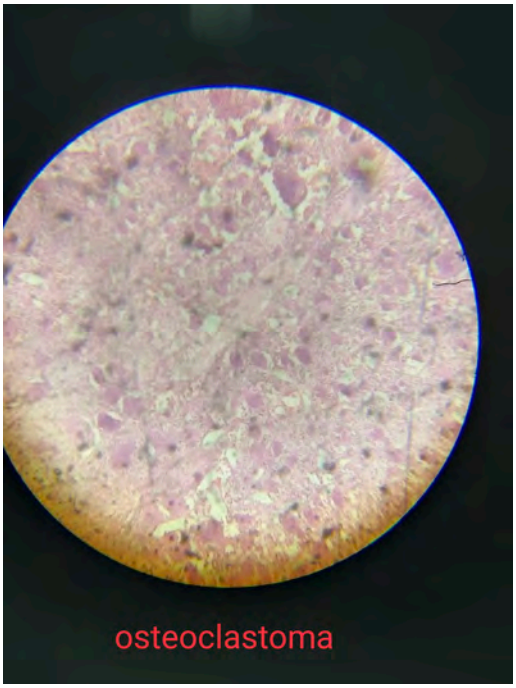

TB. INTESTINE

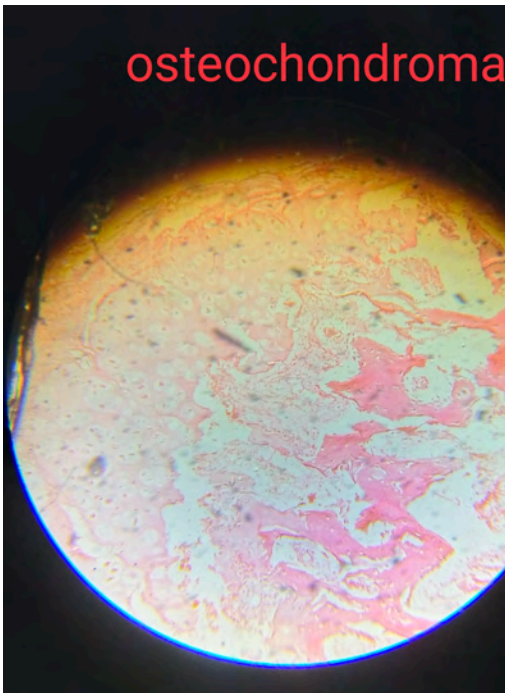

Chronic Pyelonephritis

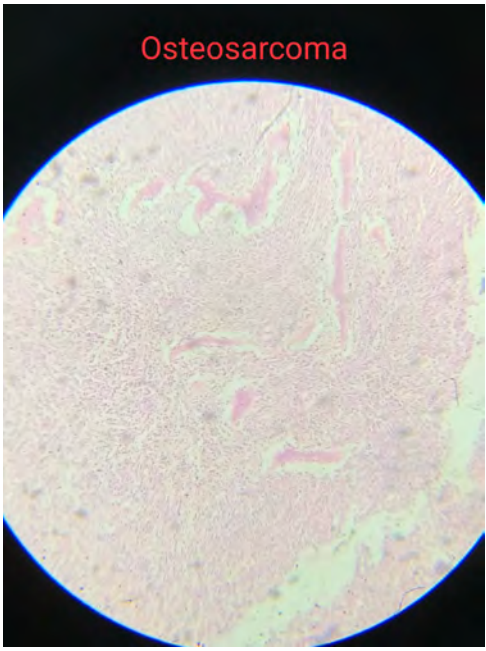

Choriocarcinoma


Cirrhosis of Liver

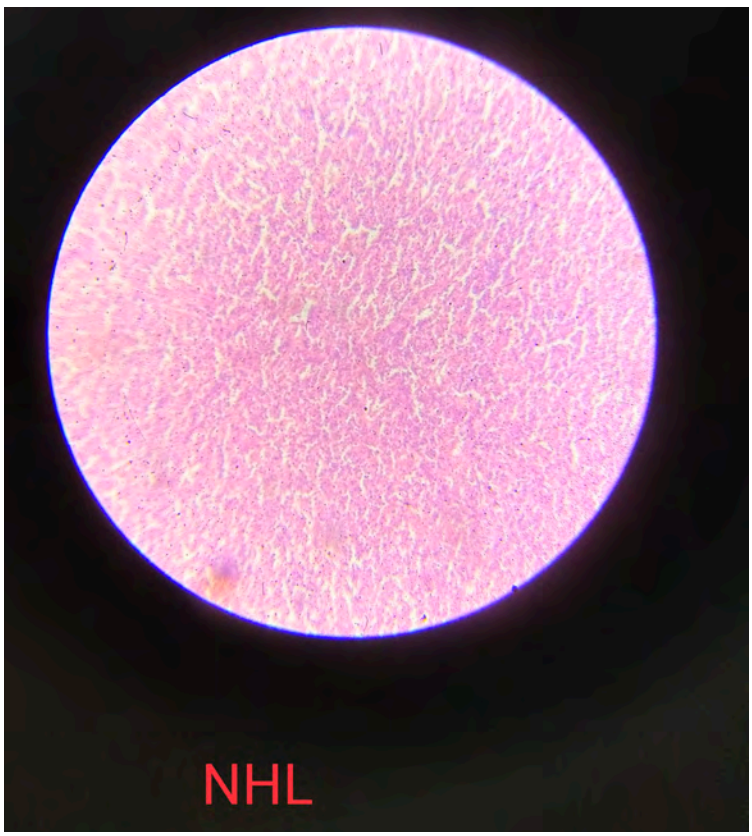

Fibrosarcoma

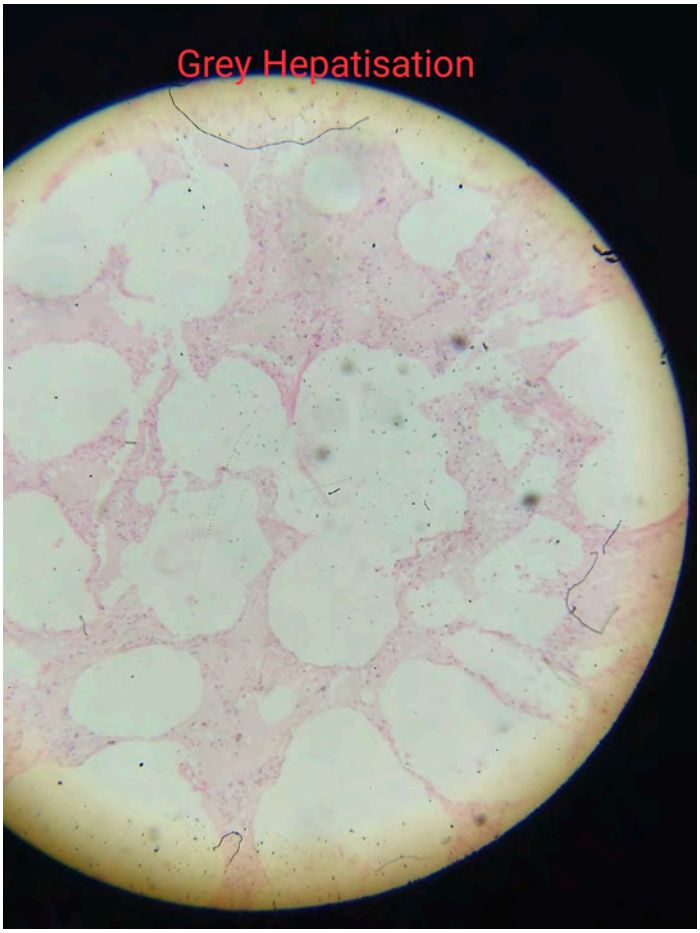

osteoclastoma

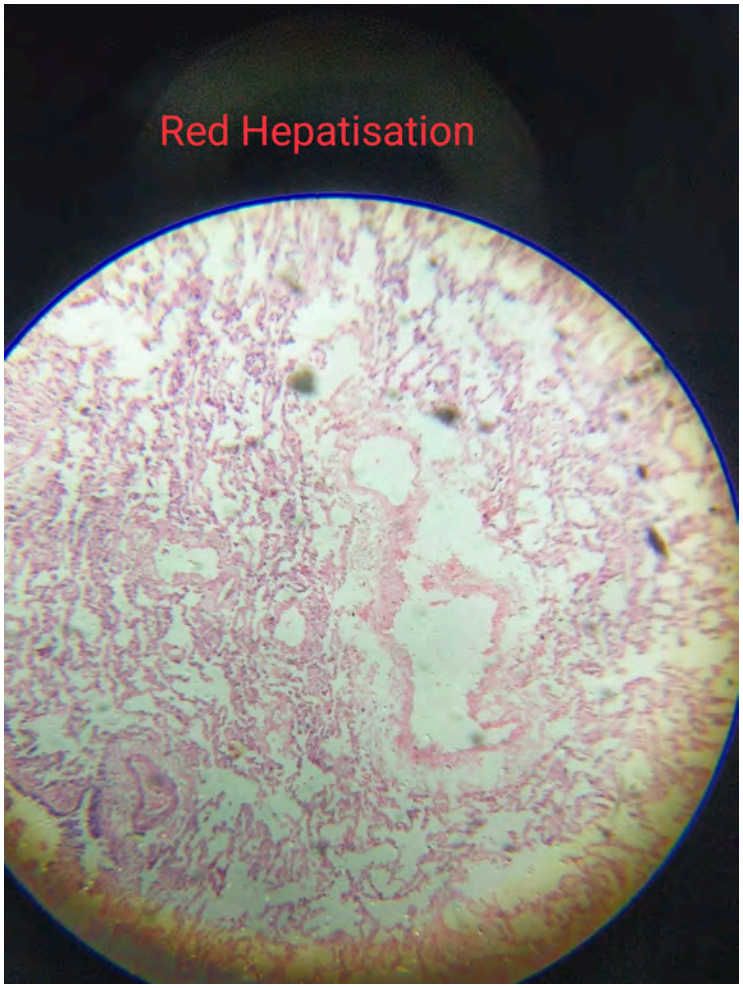

osteochondroma

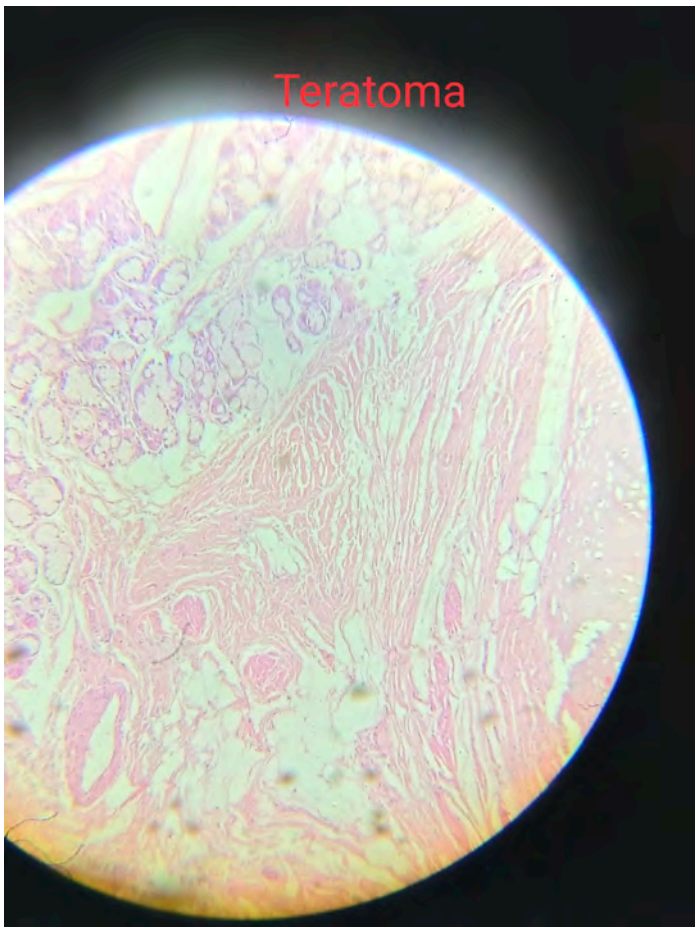

Osteosarcoma

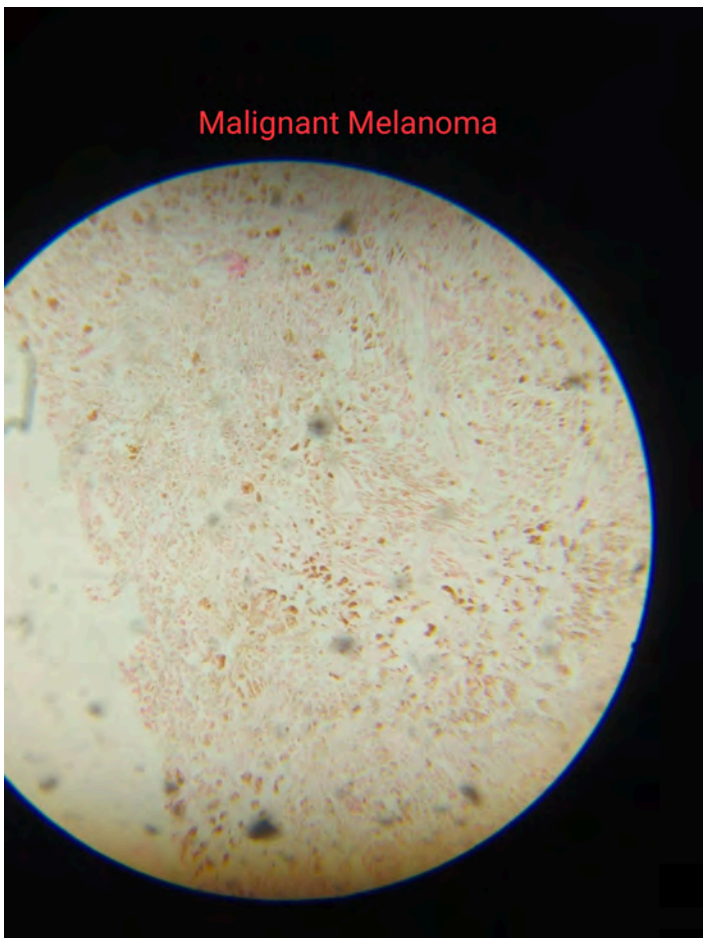

Hodgkin's

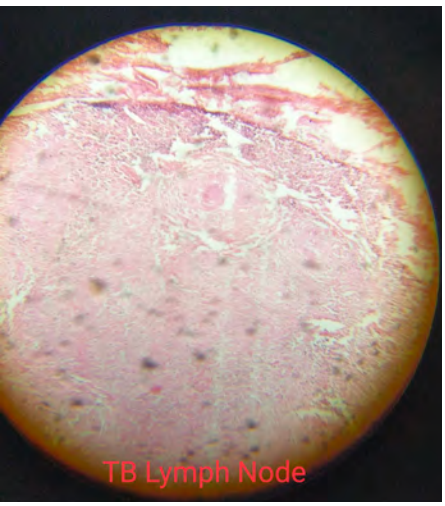

NHL

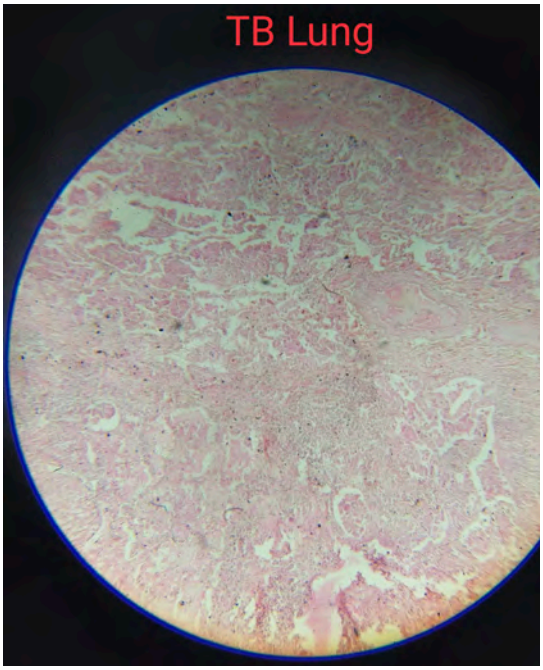

Grey Hepatisation

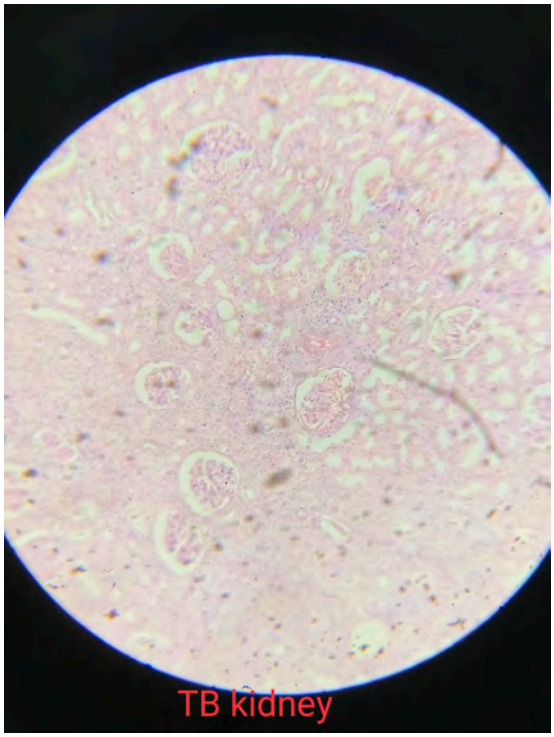

Red Hepatisation

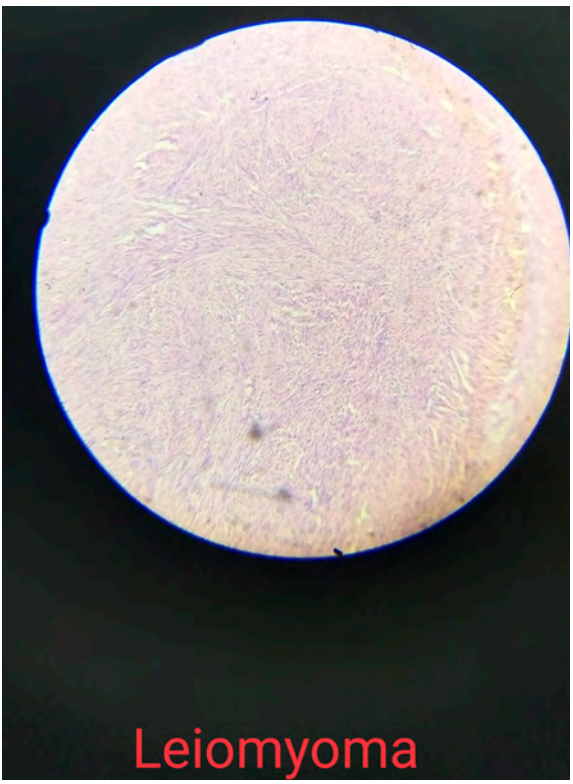

Teratoma


Malignant Melanoma

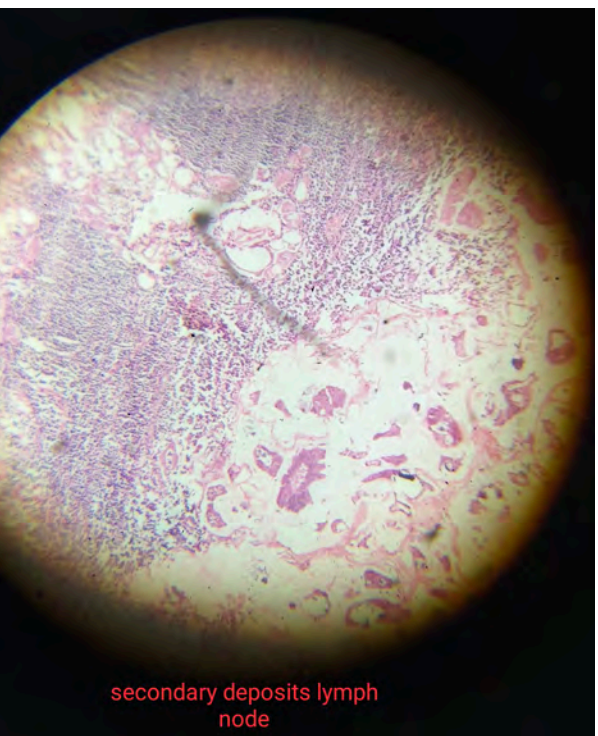

TB Lymph Node

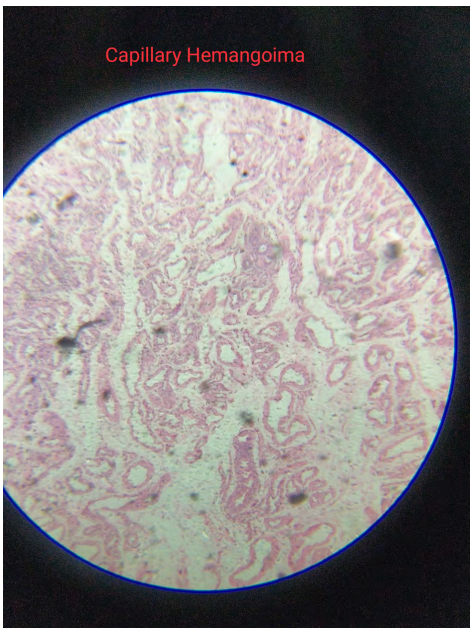

TB Lung

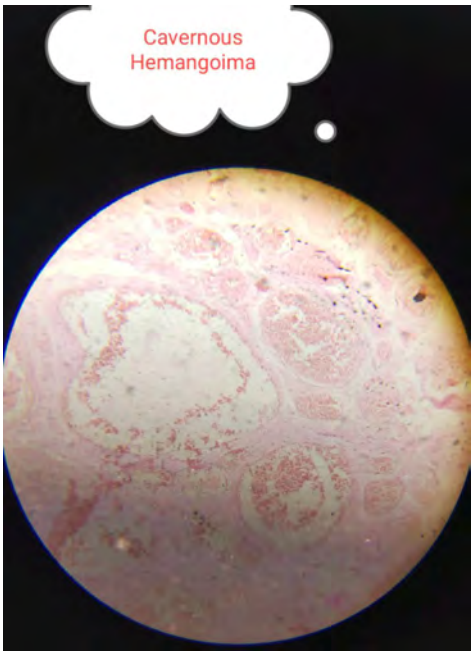

TB kidney

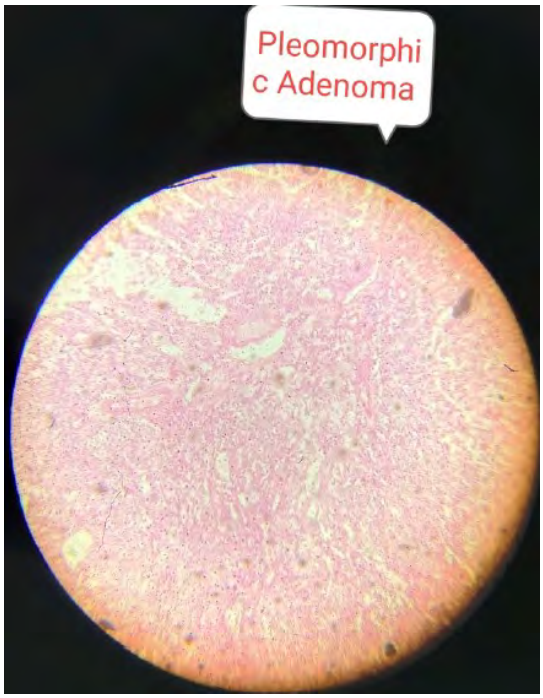

Leiomyoma

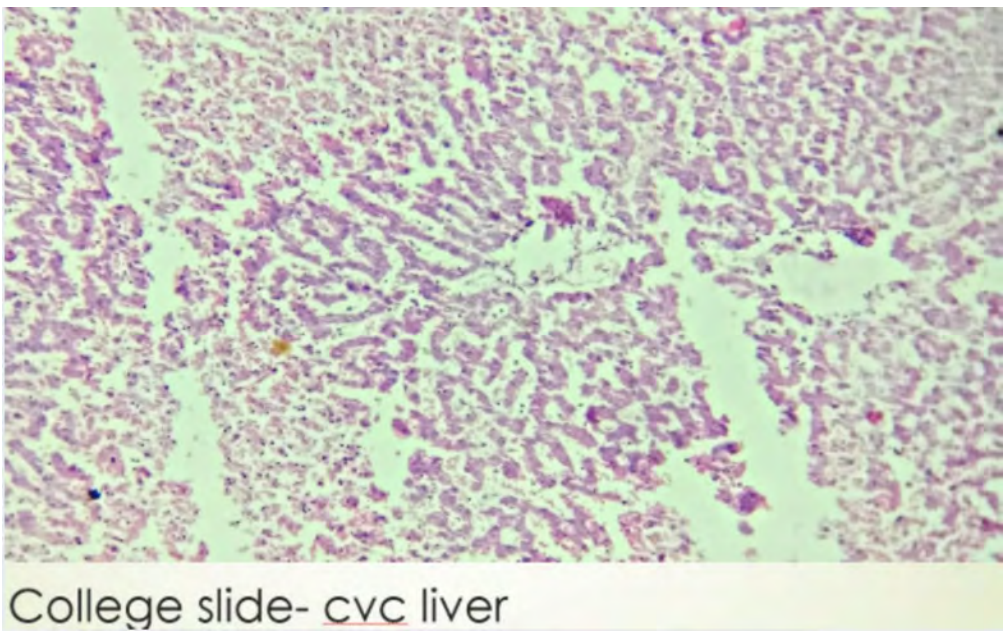

RCC

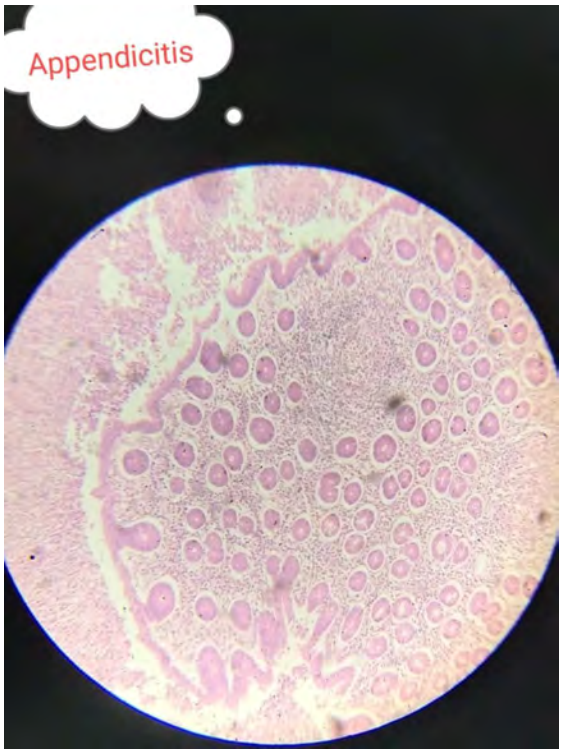

secondary deposits lymph node

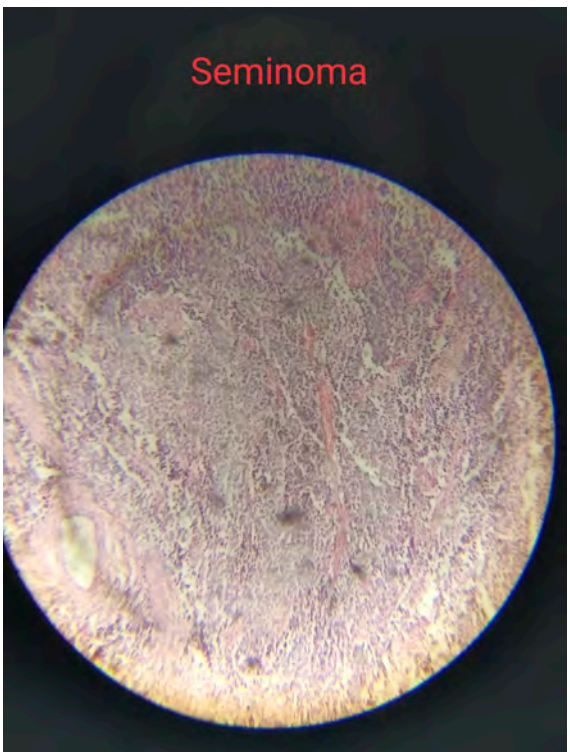


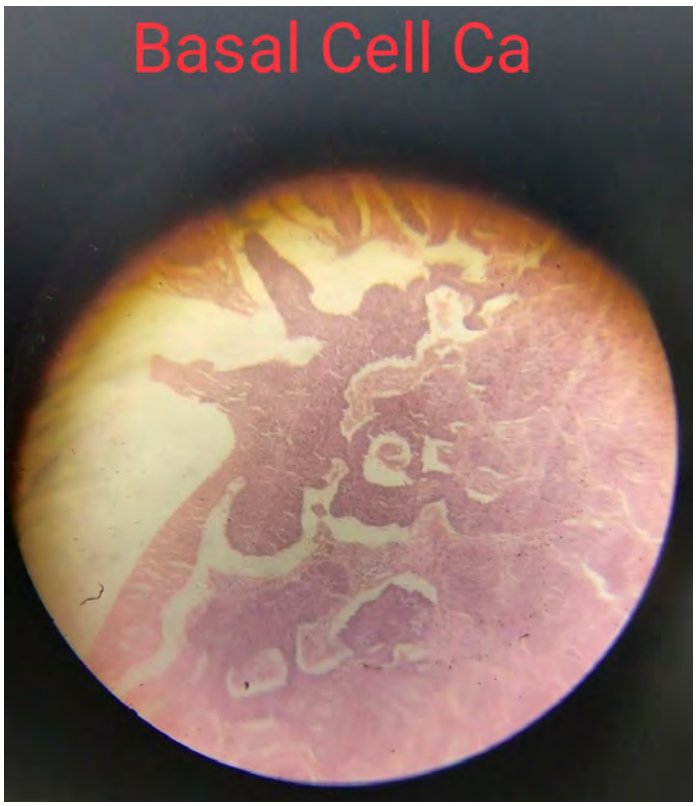




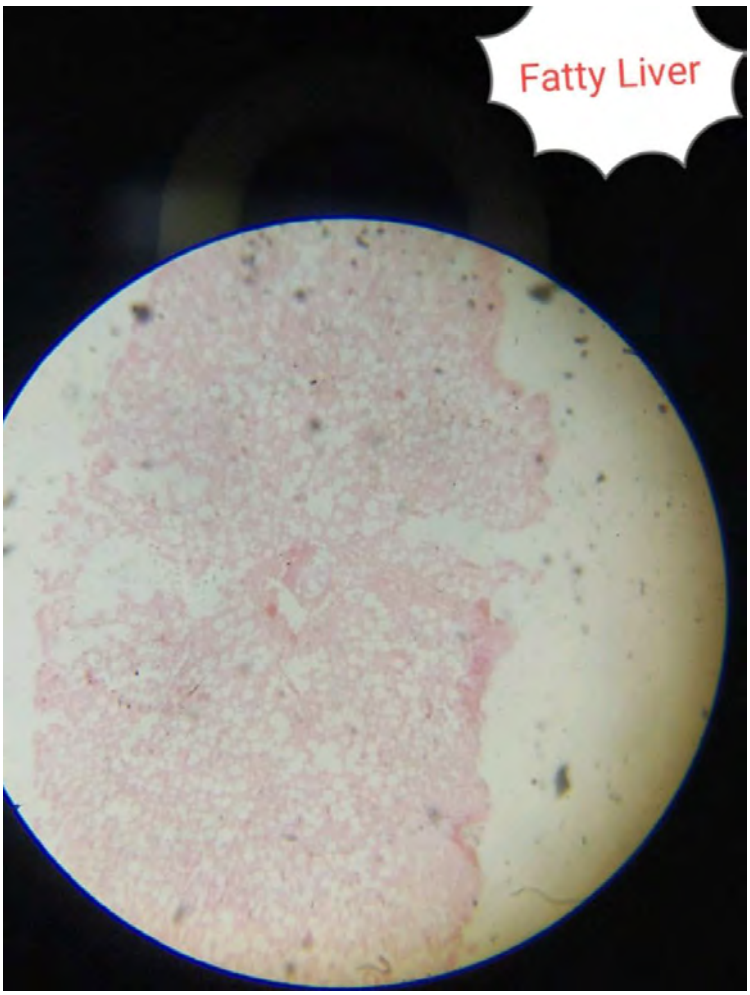

College slide- cvc liver

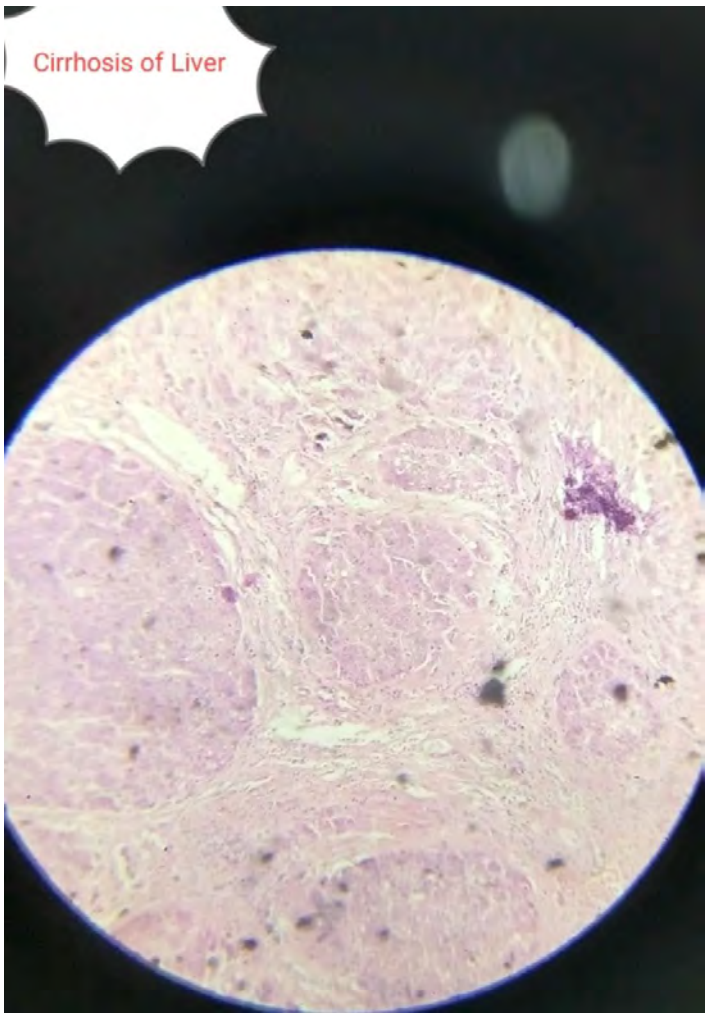


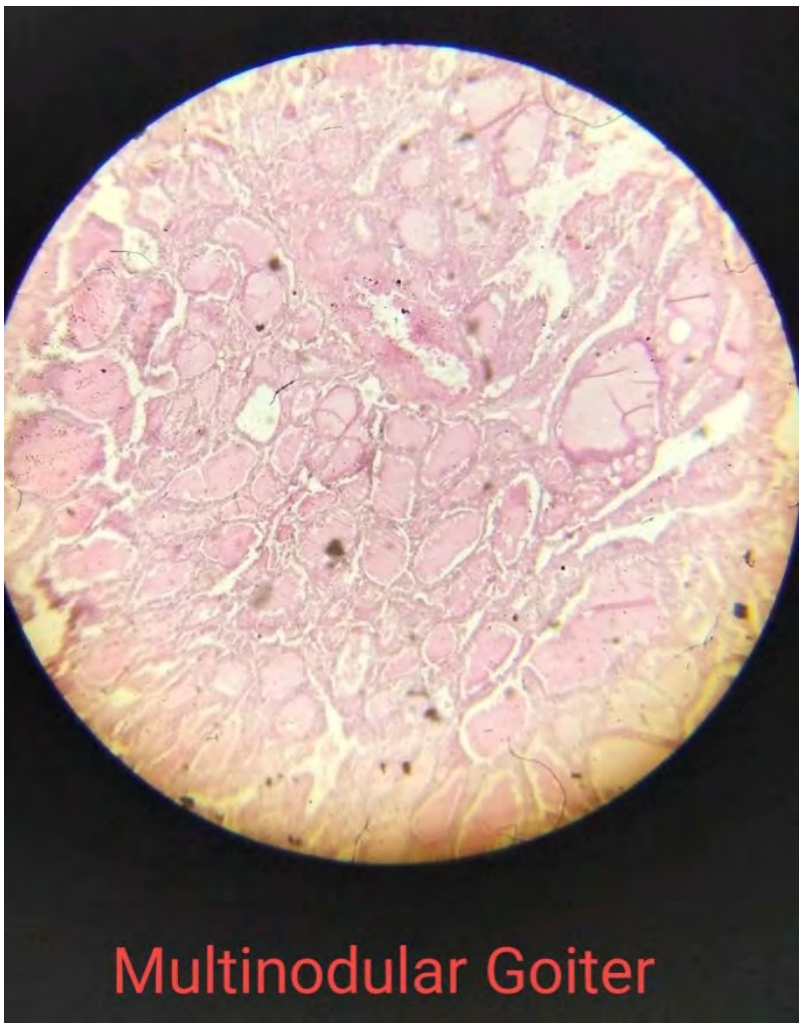


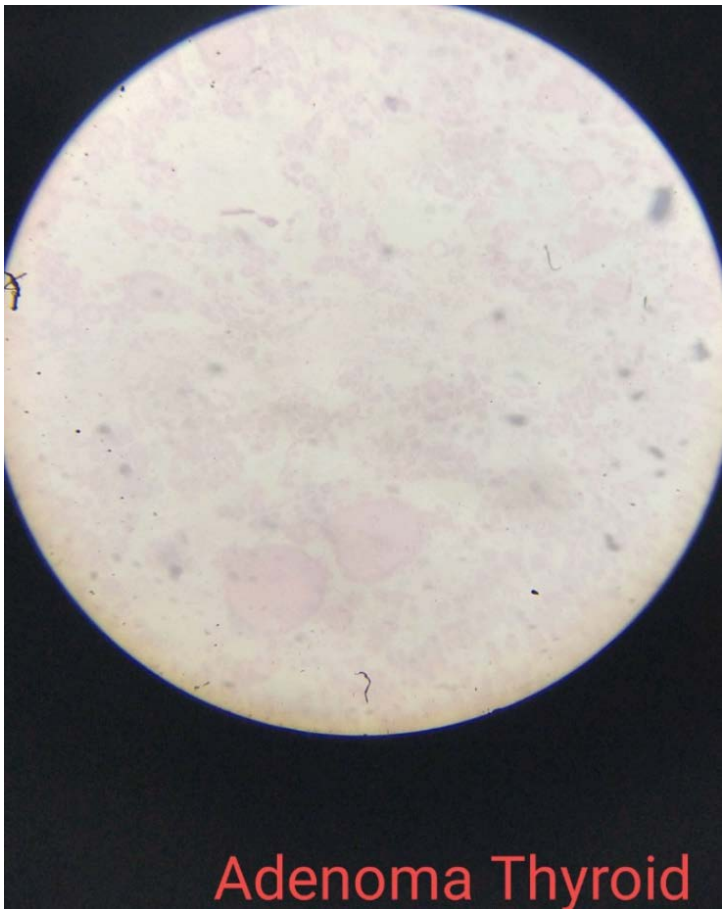

Basal Cell Ca

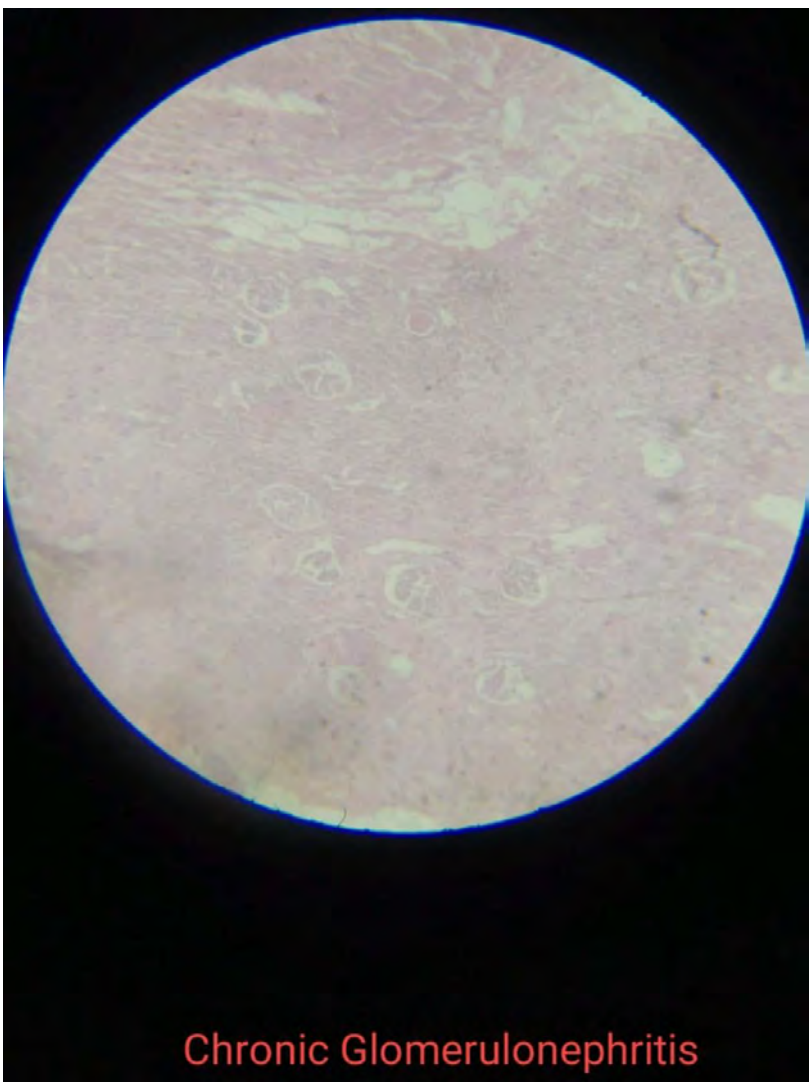

Squamous Cell
Carcinoma


Fatty Liver


Cirrhosis of Liver


Multinodular Goiter


Adenoma Thyroid


Chronic Glomerulonephritis

GROSS SPECIMENS

@pathology practicals

1. LIPOMA

- Specimen shows cut section of a soft tissue mass measuring 15 X 10 cms.
- Cut surface grey yellow, greasy lobulated mass.
- Benign tumour of fat, most common soft tissue tumor of adulthood.

LIPOMA

1. WELL ENCAPSULATED MASS OF MATURE ADIPOCYTES.
2. USUALLY ARISES IN THE SUBCUTIS OF THE PROXIMAL EXTREMITIES AND TRUNK.
3. SOFT, WELL-CIRCUMSCRIBED
4. CUT SURFACE - SOFT, PALE, YELLOW, HOMOGENOUS, MATURE APPEARING ADIPOSE TISSUE.
5. TYPICALLY NO AREAS OF HEMORRHAGE OR NECROSIS.

2. WET GANGRENE :

- Above ankle amputated specimen shows edematous foot (marked area) with altered colour and peeling of epidermis,
- It can occur due to Infection and liquefaction of dry gangrenous tissue by saprophytic bacteria.
- It's a type of liquefactive necrosis.

WET GANGRENE

1. DEVELOPS RAPIDLY DUE TO VENOUS OCCLUSION.
   LESS COMMONLY DEVELOPS DUE TO ARTERIAL OCCLUSION.
2. THE AFFECTED PART IS SOFT, SWOLLEN, PUTRID AND DARK.
3. MORE COMMON IN BOWEL.
4. PUTREFACTION IS MARKED DUE TO STUFFING OF ORGAN WITH BLOOD.
5. THERE IS NO CLEAR LINE OF DEMARCATION.

3. DRY GANGRENE

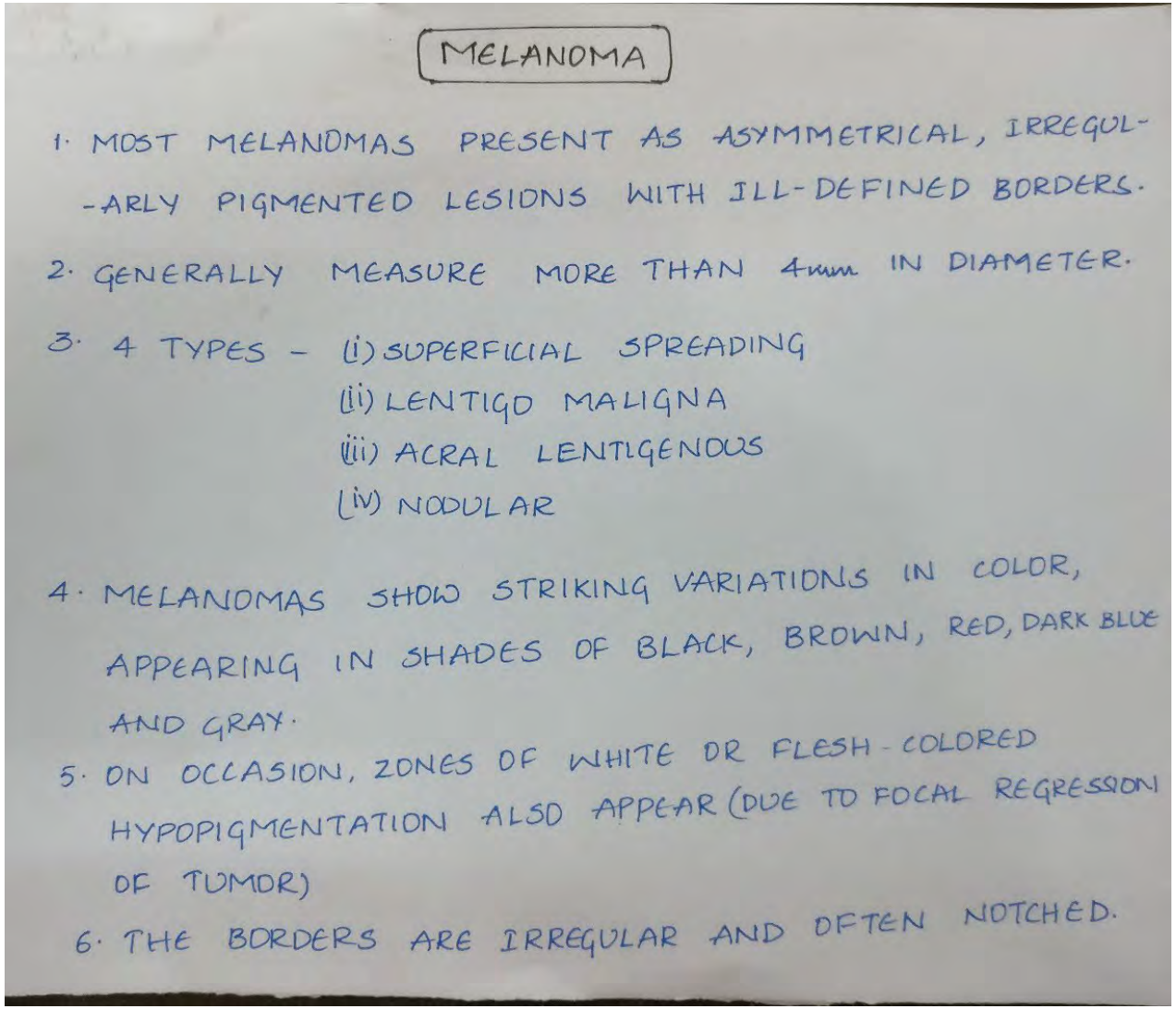
- Specimen of an amputated hand shows dry, shrivelled appearance with autoamputation of the index finger.
- Line of demarcation is the characteristic feature of dry gangrene (its not clearly visible in the specimen).
- It's a type of coagulative necrosis.

DRY GANGRENE

1. BEGINS IN THE DISTAL PART OF A LIMB DUE TO ISCHEMIA · (ARTERIAL OCCLUSION)
2. THE AFFECTED PART IS DRY, SHRUNKEN AND DARK BLACK
3. THE GANGRENE SPREADS SLOWLY UPWARDS UNTIL IT REACHES A POINT WHERE BLOOD SUPPLY IS ADEQUATE TO KEEP THE TISSUE VIABLE.
4. A LINE OF SEPARATION IS FORMED ~~A~~ BETWEEN THE GANGRENOUS PART AND THE VIABLE PART.
5. THE LINE OF SEPARATION USUALLY BRINGS ABOUT COMPLETE SEPARATION WITH EVENTUAL FALLING OFF OF THE GANGRENOUS TISSUE IF IT IS NOT REMOVED SURGICALLY.

4. MELANOMA FOOT

- Above ankle amputated specimen shows nodular growth from the sole of the foot.
- Cut section Is solid with black to brown discoloration.
- But 40% cases are amelanotic.



MELANOMA

1. MOST MELANOMAS PRESENT AS ASYMMETRICAL, IRREGULARLY PIGMENTED LESIONS WITH ILL-DEFINED BORDERS.
2. GENERALLY MEASURE MORE THAN 4mm IN DIAMETER.
3. 4 TYPES – (i) SUPERFICIAL SPREADING
   (ii) LENTIGO MALIGNA
   (iii) ACRAL LENTIGENOUS
   (iv) NODULAR
4. MELANOMAS SHOW STRIKING VARIATIONS IN COLOR, APPEARING IN SHADES OF BLACK, BROWN, RED, DARK BLUE AND GRAY.
5. ON OCCASION, ZONES OF WHITE OR FLESH-COLORED HYPOPIGMENTATION ALSO APPEAR (DUE TO FOCAL REGRESSION OF TUMOR)
6. THE BORDERS ARE IRREGULAR AND OFTEN NOTCHED.

5. INFARCTION OF SPLEEN

- Cut section of spleen showing Wedge shaped grayish-white infarct involving capsule.
- Infarcts heal as large, depressed scars.

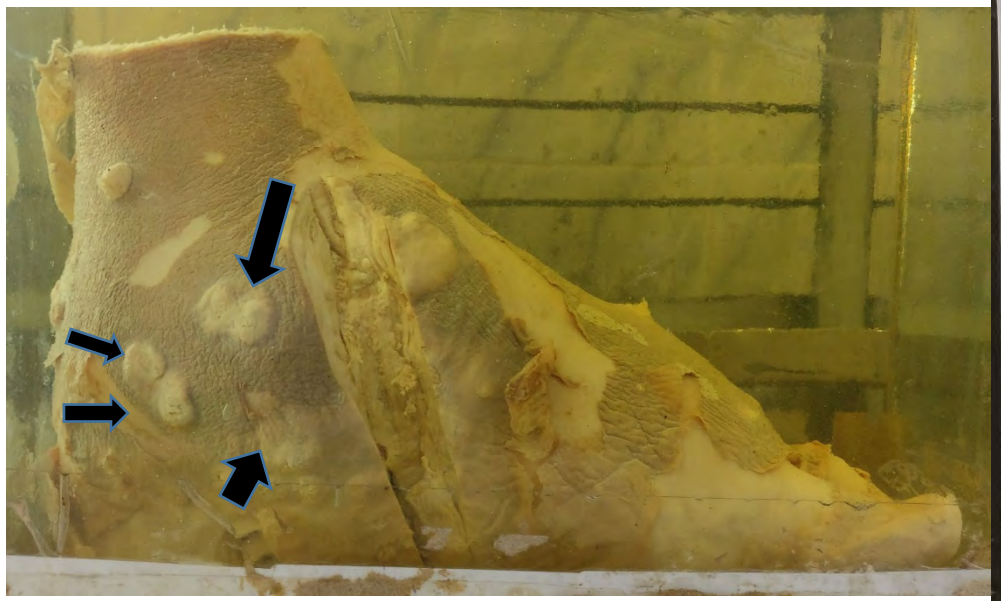
INFARCTION SPLEEN

1. INFARCTS ARE OF WEDGE SHAPE; WITH THE OCCLUDED VESSEL AT THE APEX AND THE PERIPHERY OF THE ORGAN FORMS BASE.
2. IN SPLEEN INFARCTS ARE MOSTLY → WHITE INFARCTS [WHITE INFARCT → OCCUR WITH ARTERIAL OCCLUSIONS IN SOLID ORGANS WITH END-ARTERIAL CIRCULATION]
3. FRESH INFARCTS ARE POORLY DEFINED AND SLIGHTLY HEMORRHAGIC.
4. WITH PASSAGE OF TIME, INFARCTS BECOME PROGRESSIVELY PALER AND MORE SHARPLY DEFINED.

6. MYCETOMA FOOT

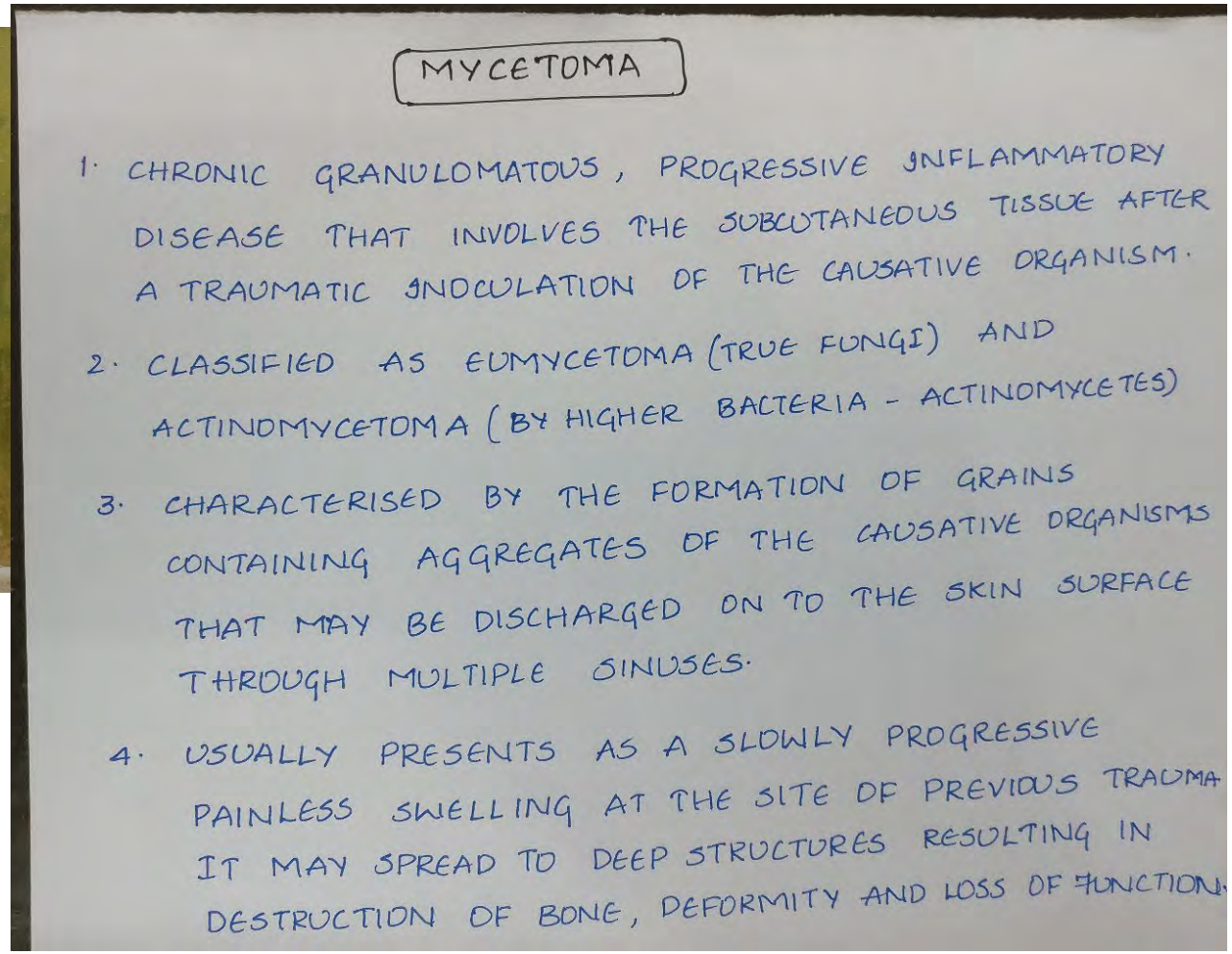
Viva Q?

- Causative organisms?
- How to diagnose?
- Differential diagnosis?
- Granules and their colours?



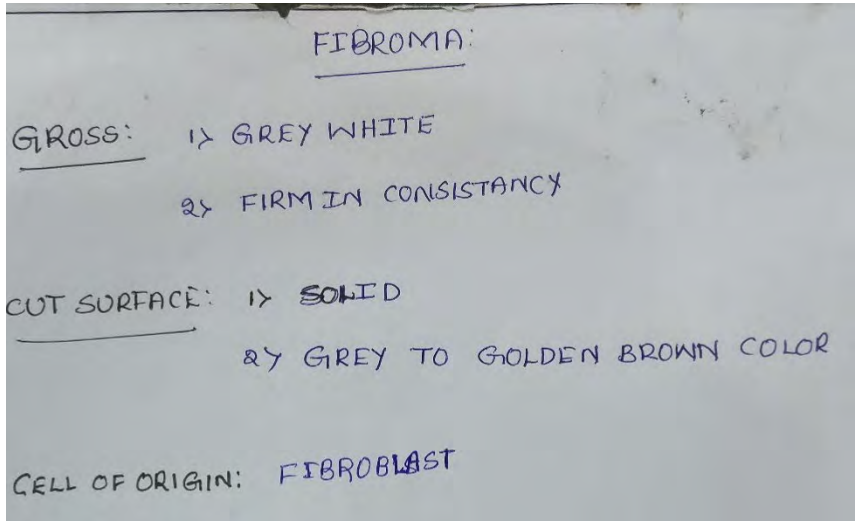
DESCRIPTION

- Specimen of amputated foot showing multiple nodular lesions with sinus openings, each nodule measuring around 1cm in diameter. Skin appears eroded at the lesions.
- Foot appears to be swollen&/ oedematous indicating some inflammatory changes

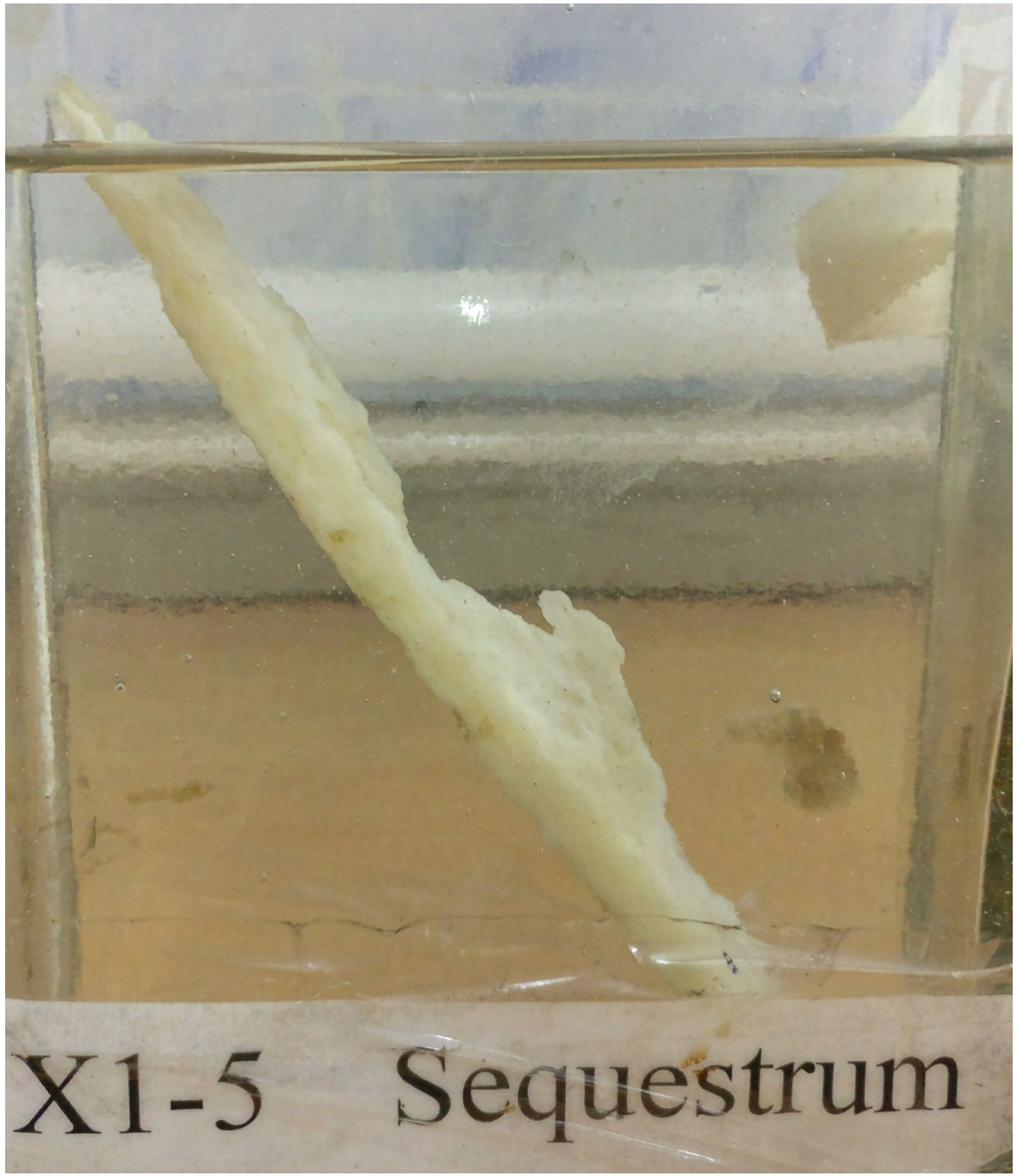


7. FIBROMA OF OVARY

- Cut section of ovary(probably) which is enlarged in size & spherical in shape.
- Encapsulated and glistening mass with slightly lobulated surface.
- Solid grey white homogenous in cut section.



- Other sites of fibroma ?
- Ovarian tumors classification



SEQUESTRUM

Specimen of thin gray white necrotic bony fragment

SEQUESTRUM

→ SPECIMEN OF FRAGMENT OF BONE

1) IS THE NECROTIC BONE THAT IS EMBEDED IN THE INFECTED GRANULATION TISSUE

2) BONE THAT HAS BECOME SEPERATED DURING THE PROCESS OF NECROSIS FROM SOURROUNDING NORMAL BONE

3) SEEN IN CHRONIC OSTEOMYELITIS.

HYDATID CYST OF LIVER

Single unilocular cyst with fibrous wall

HYDATID CYST

→ CAUSED BY ECHINOCOCCUS GRANULOSUS.

→ DURATION ∝ SIZE OF CYST (Approx >10cms)

→ CYST 1) OUTER – PERICYST – DENSE FIBROVASCULAR TISSUE – "HOST ORIGIN"

2) ECTOCYST/ LAMINATED MEMBRANE – AVASCULAR

3) INNER – ENDOCYST/ GERMINAL LAYER – BROOD CAPSULE

→ "HYDATID SAND" – DEGENERATED SCOLICES SEDIMENT IN THE HYDATID FLUID.

FATTY LIVER

Specimen of liver which is enlarged.
Surface is smooth and greasy showing yellowish discolouration.

FATTY LIVER

→ ALSO KNOWN AS STEATOSIS

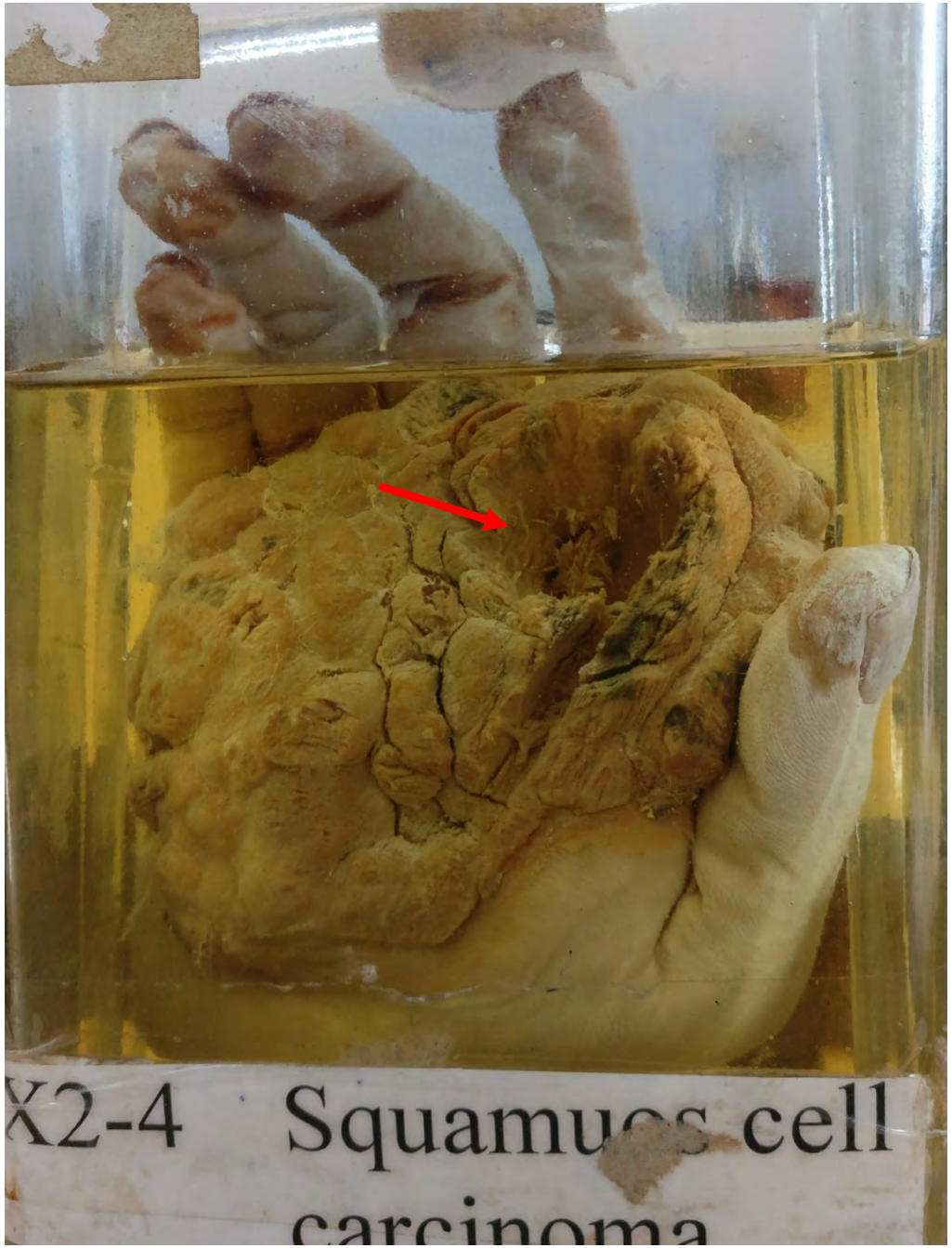
→ ABNORMAL ACCUMULATIONS OF TRIGLYCERIDES WITHIN PARENCHYMAL CELLS.

→ SEEN IN LIVER – MOST COMMON (MAJOR ORGAN FOR FAT METABOLISM); HEART, MUSCLE AND KIDNEY

→ CAUSES :
1) ALCOHOL ABUSE
2) TOXINS
3) PROTEIN MALNUTRITION
4) DIABETES
5) OBESITY
6) ANOXIA

→ LIPID ACCUMULATES AS SMALL DROPLETS → COALESCE INTO LARGE DROPLETS → DISTEND THE HEPATOCYTE AND PUSH THE NUCLEUS ASIDE

GROSS: LARGE → 4-6kg; SOFT YELLOW GREASY.



SQUAMOUS CELL CARCINOMA

Specimen of amputated right hand showing fungating mass on the palmar aspect.
Surface shows an ulcer(arrow).

SQUAMOUS CELL CARCINOMA

→ CAUSE : UV LIGHT EXPOSURE → DNA DAMAGE
→ SECOND MOST COMMON TUMOUR ARISING ON SUN-EXPOSED SITES IN ELDERLY.

GROSS : "CAULIFLOWER LIKE"
FUNGATING / ULCEROPROLIFERATIVE GROWTH

CVC LIVER

CVC LIVER (SOLID ORGAN)

1) CHRONIC VENOUS CONGESTION OF LIVER (CVC) IS MAINLY DUE TO RIGHT HEART FAILURE (OR) IVC (OR) HEPATIC VEIN OBSTRUCTION

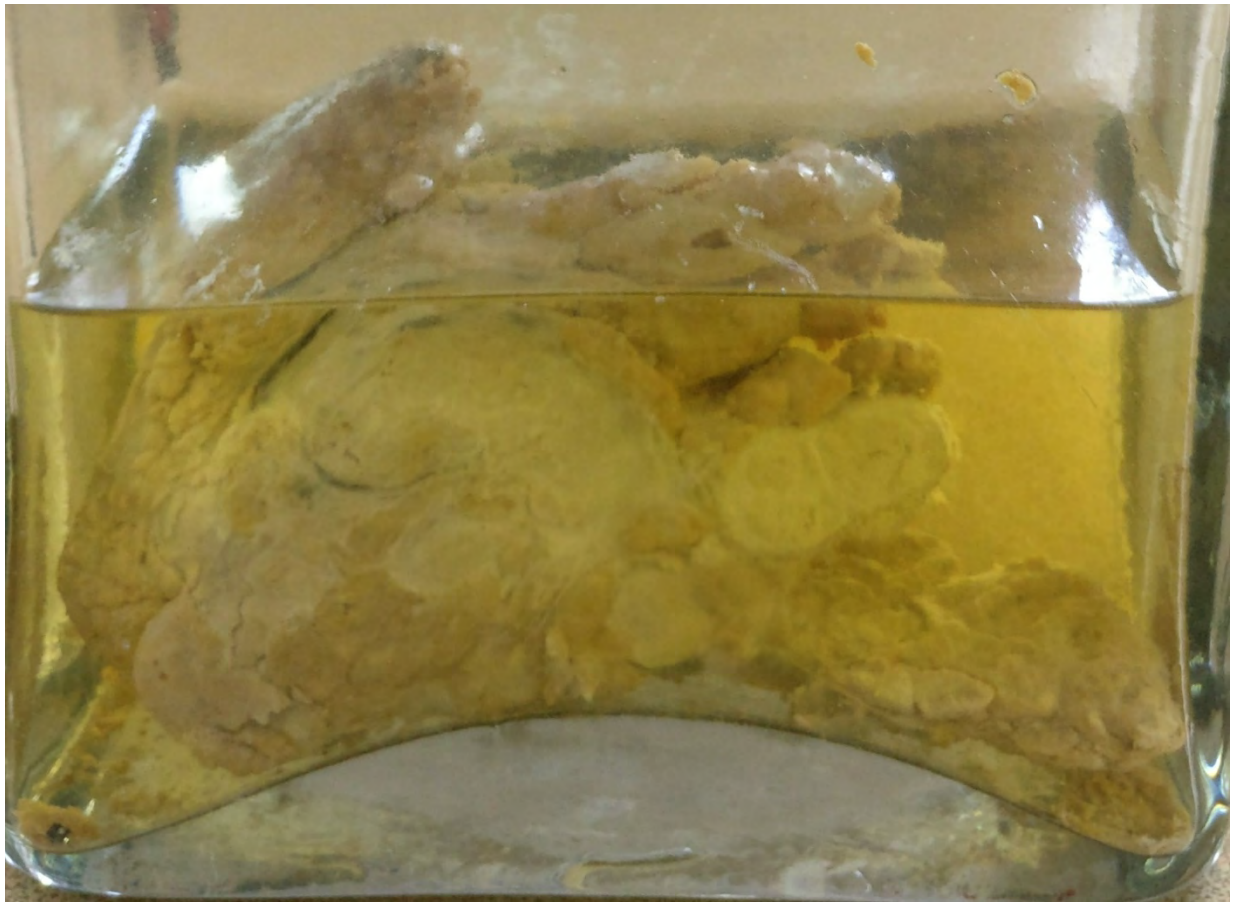
2) GROSSLY

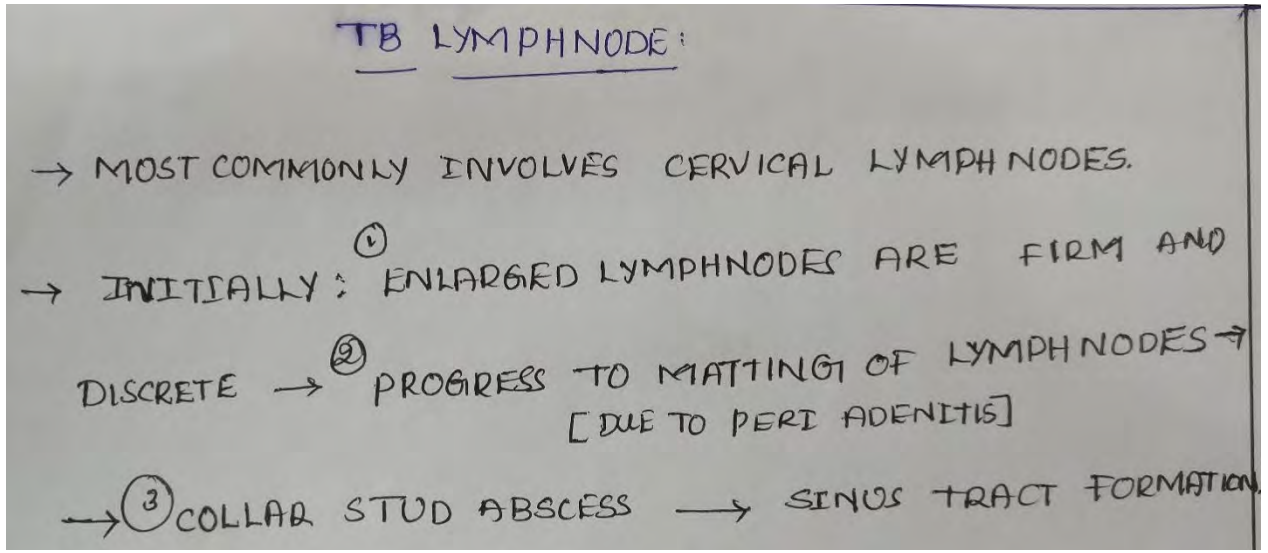
A) LIVER IS ENLARGED AND CAPSULE IS TENSE

B) CUT SECTION: SHOW RED AND YELLOW MOTTLED APPEARANCE → NUTMEG LIVER

TB LYMPH NODE

Specimen of multiple matted lymph nodes of varying sizes.
Cut section shows yellow caseating necrosis.





Q. What is scrofula.
Q. Most freq presentation of extrapulmonary TB?

CHRONIC GASTRIC ULCER

Specimen of partial gastrectomy showing ulceration which is oval and sharply punched out.

Base of ulcer is smooth and has fibrinoid debri(arrow) which indicates active nature.

CHRONIC GASTRIC ULCER

→ CHRONIC MUCOSAL ULCERATION AFFECTING STOMACH LINING.
→ MC SITE : JUNCTION OF BODY & ANTRUM / GASTRIC ANTRUM
→ RISK FACTORS:
1) H.PYLORI INFECTION
2) CIGARETTE USE
3) NSAIDS / DRUGS
4) COPD
5) ALCOHOLIC CIRRHOSIS (DUODENAL PUD)
6) ENDOCRINE CELL HYPERPLASIA
7) ZES
8) PSYCHOLOGICAL STRESS
9) VIRAL INFECTIONS

GROSS: ROUND-OVAL, PUNCHED OUT DEFECT.
* BASE IS SMOOTH & CLEAN → PEPTIC DIGESTION OF EXUDATE
* HEMORRHAGE & FIBRIN DEPOSITION - ON GASTRIC SEROSA.

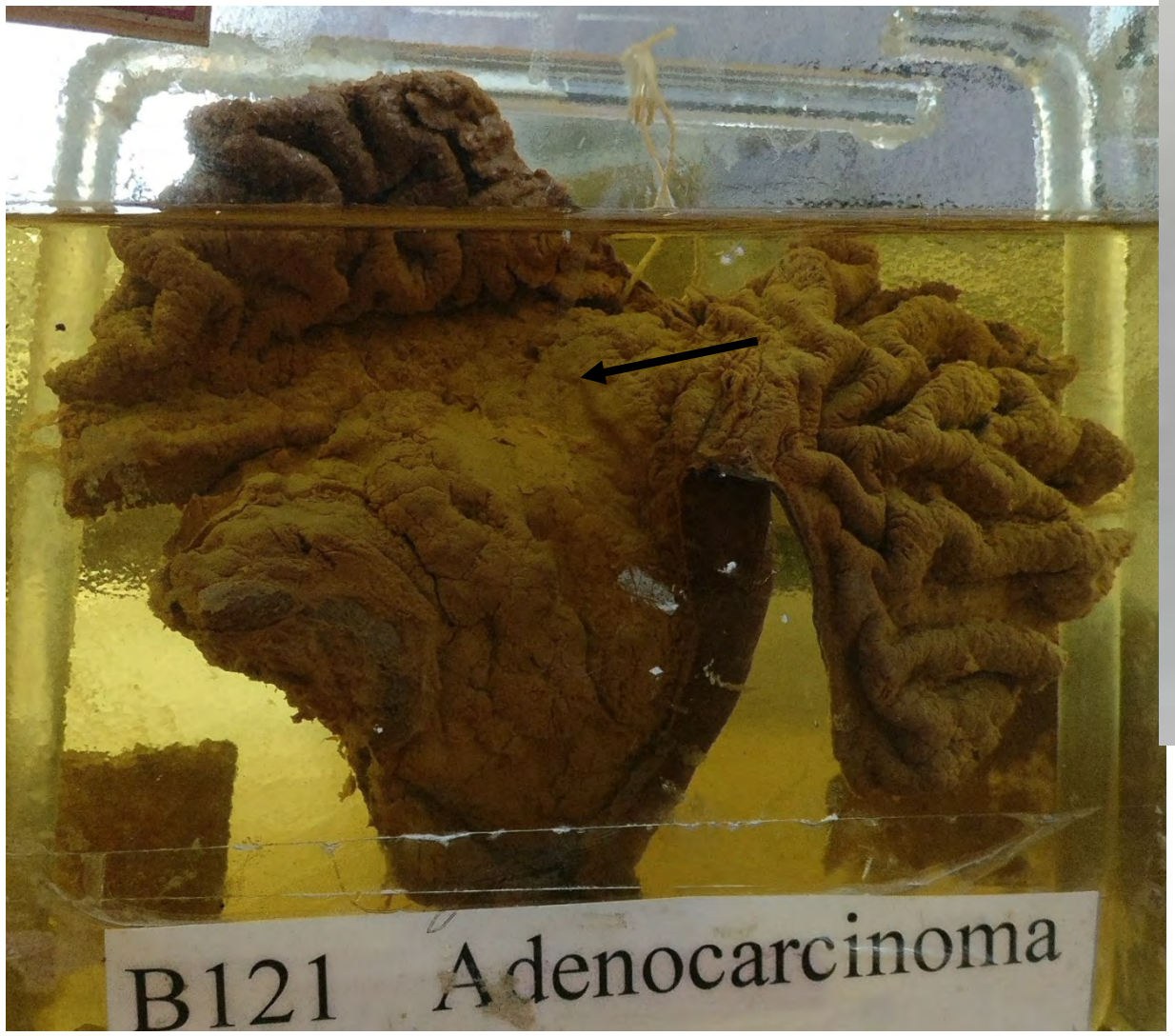
COMPLICATION : PERFORATION

Clean base indicates inactive ulcer.

Q. Layers of peptic ulcer in histology

ADENOCARCINOMA STOMACH

Specimen of partial gastrectomy showing proliferating mass with a central ulceration which is oval with heaped up margins.
Note the loss of rugae surrounding the ulcer..



ADENOCARCINOMA STOMACH

→ >90% OF ALL GASTRIC CANCERS

→ SITE : GASTRIC ANTRUM / LESSER CURVATURE >> GREATER CURVATURE

→ 2 FORMS — 1) INTESTINAL TYPE — BULKY MASSES
2) DIFFUSE TYPE — INFILTRATES DIFFUSELY, THICKENS

GROSS: INTESTINAL TYPE — EXOPHYTIC MASS/ ULCERATED TUMOR
— ELEVATED MASS c HEAPED UP BORDERS & CENTRAL ULCERATION

DIFFUSE TYPE — GASTRIC WALL DIFFUSELY THICKENED & RUGAL FOLDS ARE PARTIALLY LOST ⇒ LEATHER BOTTLE APP
↓
LINITIS PLASTICA

TB INTESTINE

Specimen of resected part of large intestine showing ???

TB INTESTINE

→ SPECIMEN OF FORMALIN FIXED CUT OPENED INTESTINE

→ ILEUM MOST COMMONLY INVOLVED

→ GRANULOMATOUS INFLAMMATION THAT CAN LEAD TO ULCERATION OF THE OVERLYING MUCOSA

→ ULCER → STRICTURE FORMATION

→ a) CIRCULAR
b) ENTIRE CIRCUMFERANCE IS INVOLVED
c) LEADING TO STRICTURE FORMATION
d) INTESTINAL OBSTUCTION

TYPHOID ULCER

Specimen of resected part of ileum showing oval shaped ulcer oriented along the long axis of the intestine.

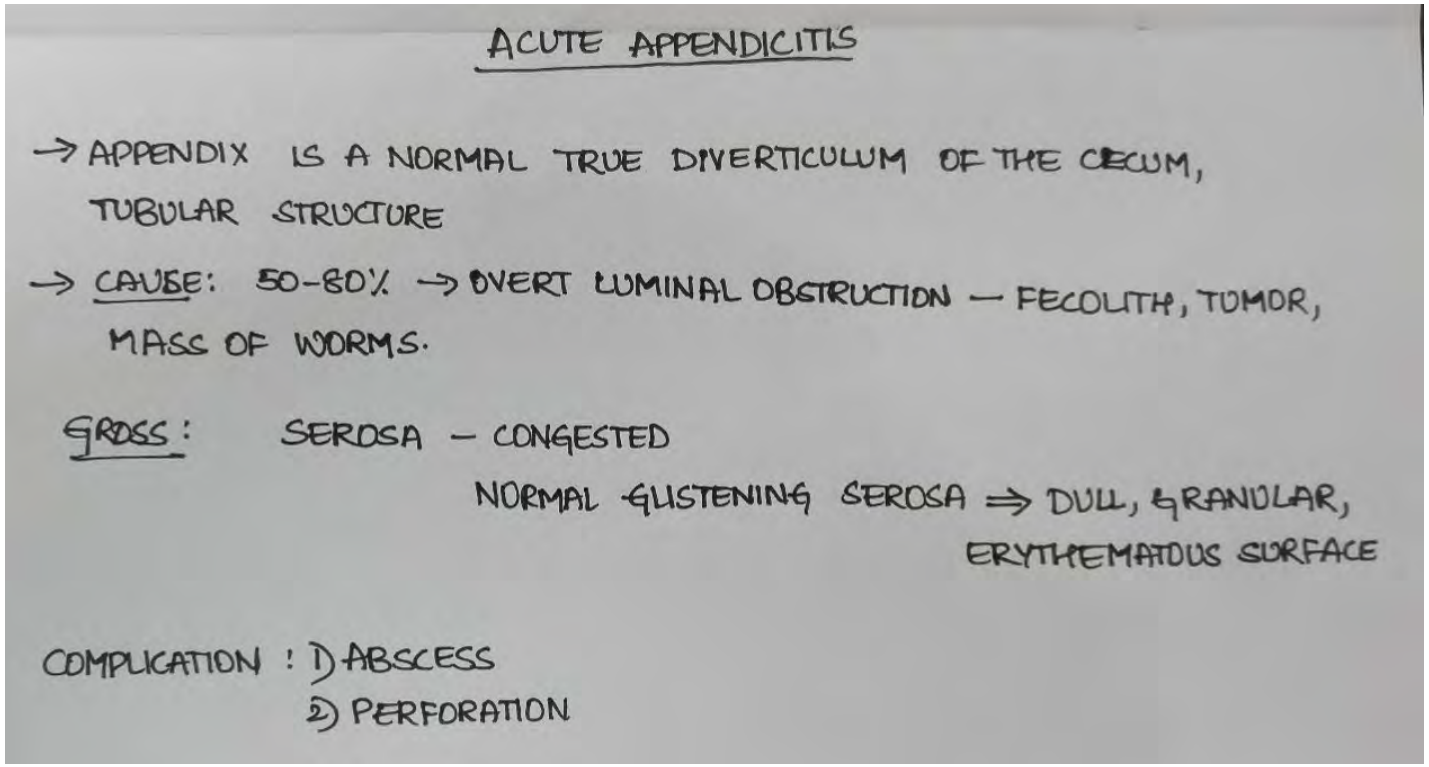
- a/c enteric fever- salmonella enterica.
- These bacteria attack M cells in small bowel and then engulfed by macrophages.
- They can disseminate via lymphatic and blood vessels.

Q. What happens to payers patches???

Q. What are typhoid nodules???

ACUTE APPENDICITIS

Specimen of appendicectomy showing dull erythematous serosa indicating congestion.



Q. The diagnostic histological feature of acute appendicitis???

CIRRHOSIS OF LIVER

Specimen of liver which is shrunken with surface showing multiple nodules of varying sizes.

CIRRHOSIS OF LIVER

→ COMPOSED OF REGENERATING PARENCHYMAL NODULES, SURROUNDED BY DENSE BANDS OF SCAR TISSUE.

→ 2 TYPES
- MICRO NODULAR < 3 MMS
- MACRO NODULAR > 3 MMS

GROSS: SURFACE IRREGULAR SHOWING REGENERATIVE NODULES OF VARYING SIZE.

CAUSES: ALCOHOL
HEPATITIS B, C

MITRAL STENOSIS

2) AMOEBIC LIVER ABSCESS

✓ CAUSATIVE AGENT: ENTAMOEBA HISTOLYTICA

✓ PARASITE OCCURS IN 2 FORMS: TROPHOZOIT AND CYSTIC FORM

GROSS:

1) SINGLE

2) RIGHT LOBE OF LIVER

3) CENTRE PART OF ABSCESS CONTAINS NECROTIC AREA FILLED WITH REDDISH BROWN. THICK PUS WHICH RESEMBLES ANCHOVY (OR) CHOCOLATE SAUCE

ATHEROSCLEROSIS

ATHEROSCLEROSIS:

→ SPECIMEN OF CUT OPNED AORTA

→ IT IS A DISEASE OF LARGE AND MEDIUM SIZED ARTERIES

CHARACTERIZE BY ① ENDOTHELIAL DYSFUNCTIONS

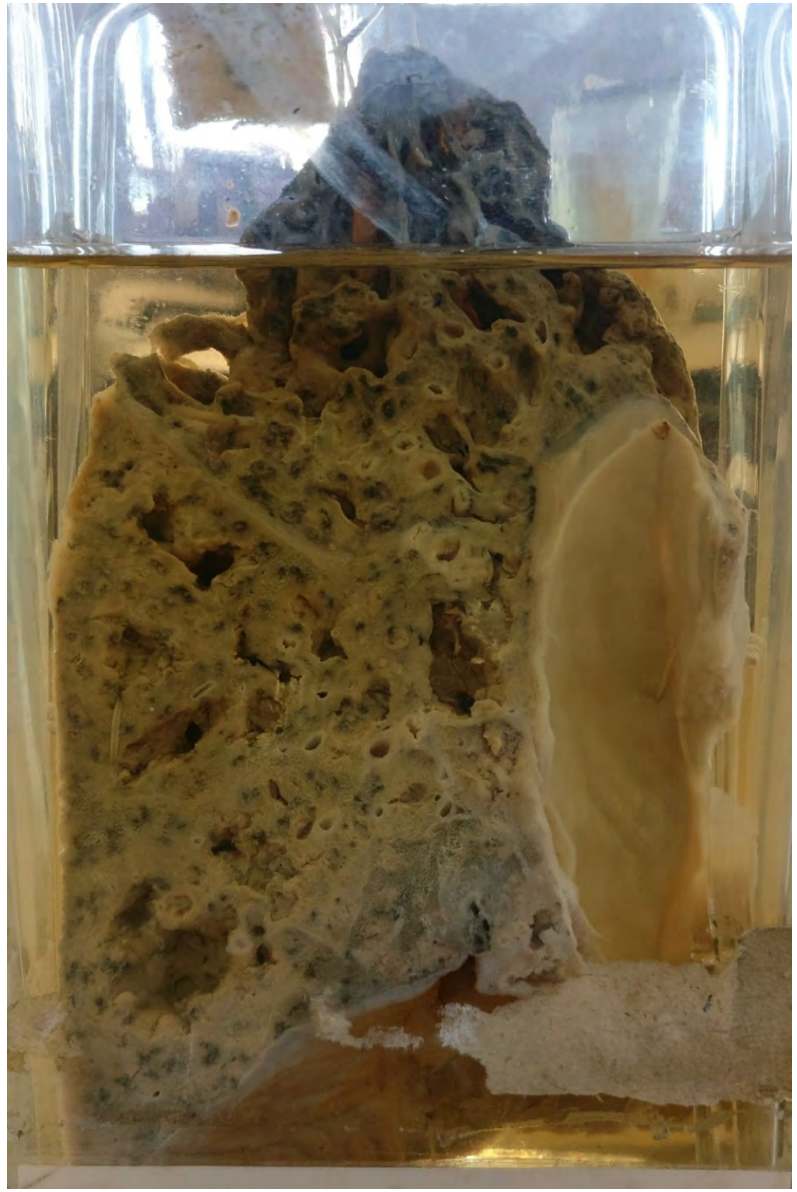
② VASCULAR INFLAMMATION

③ ATHEROMA FORMATION

→ ATHEROMA ALSO CALLED ATHEROMATOUS PLAQUE

THAT PROTRUDE INTO VASCURAR LUMEN

TB LUNG



TB LUNG:

SPECIMEN OF LUNG CUT SECTION

PRIMARY TUBERCULOSIS:

1) MOST COMMONLY INVOLVES UPPER PART OF LOWER LOBE OR LOWER PART OF UPPER LOBE NEAR PLEURA

2) GHON FOCUS: 1 - 1.5 2CM AREA OF GREY WHITE INFLAMMATION WITH CONSALIDATION.

3) GHON COMPLEX: GHON FOCUS + NODAL INVOLVEMENT

4) RANKE COMPLEX: GHON COMPLEX + RADIOLAGICALLY DETECTABIE CALCIFICATION

SECONDARY TB:

1) MOST COMMONLY INVOLVES APICAL LOBE

2) FOCI OF CONSALIDATION < 2 cm.
   - → SHARPLY CIRCUMSCRIBED, FIRM.
   - → GREY WHITE TO GREY YELLOW
   - → HAVING CENTRAL CASEATION AND PERIPHERAL FIBROSIS

3) CAVITATION

PROGRESSIVE PRIMARY TB:

1) THE APICAL LESION EXPANDS INTO ADJACENT LUNG ERODES INTO BRONCHI AND VESSALS

2) CAVITY FORMATION

BRONCHIECTASIS

BRONCHIECTASIS

1) FORMALIN FIXED SPECIMEN OF LUNG WITH BRONCHUS

→ CUT SECTION SHOWS → MARKEDLY DILATED PERIPHERAL BRONCHI FILLED WITH MUCO PURULENT SECRETIONS.

2) USUALLY AFFECTS THE LOWER LOBES.

CAUSES: 1) STAPHYLOCOCCI

2) STREPTOCOCCI

3) PNEUMOCOCCI

3) H. INFLUENZAE

BRONCHOGENIC CARCINOMA

BRONCHOGENIC CARCINOMA TRACHIA, BRONCHUS

1> FORMALIN FIXED SPECIMEN OF LUNG SHOWING A GREY WHITE LESION (TUMOR) THAT INFILTRATES THE LUNG PARENCHYMA.

2> IT BEGINS AS A SMALL MUCOSAL LESION → GROWS INTRA LUMINAL MASS → INVADES BRONCHIAL WALL → FINALLY INVADES LUNG PARENCHYMA →

CLASSIFICATION.

1> ADENOCARCINOMA (38%)
2> SQUAMOUS CELL CARCINOMA (20%)
3> SMALL CELL CARCINOMA (14%)
4> LARGE CELL CARCINOMA (3%)
5> OTHERS.

POLYCYSTIC KIDNEY

POLY CYSTIC KIDNEY DISEASE

⇒FORMALIN FIXED CUT SECTION OF KIDNEY WITH HILUM.
→ (30x15x8 CM)

SHOWING : 1) KIDNEY IS ENLARGED, BOSSELATED

2) CUT SECTION SHOWING MULTIPLE CYSTS OF VARYING SIZES LARGEST MS: 6X6 CM.

→ TWO TYPES

(1) ADULT POLYCYSTIC KIDNEY: AUTOSOMAL DOMINANT

(2) CHILDHOOD POLYCYSTIC KIDNEY DISEASE: AUTOSOMAL RECESSIVE.

HORSE SHOE KIDNEY

HORSE SHOE KIDNEY

→ TWO BEAN SHAPED STRUCTURES FUSING AT THE LOWER POLE; BLADDER & URETERS

→ MOST COMMON TYPE OF RENAL FUSION ANOMALY.

→ IT CONSISTS OF TWO DISTINCT FUNCTIONING KIDNEYS ON EACH SIDE OF THE MIDLINE, CONNECTED AT THE LOWER POLES BY AN ISTHMUS OF FUNCTIONING RENAL PARENCHYMA OR FIBROUS TISSUE THAT CROSSES MIDLINE OF BODY

→ SPECIMEN SHOWS – EACH KIDNEY m/s ~~7~~cm x4cms.
LOWER POLES ⇒ HORSE-SHOE SHAPE
BLADDER – m/s 11x7cms
URETERS – m/s 12cms.

* UPPER POLE FUSION – 10% ; LOWER POLE – 90%.

CHOLELITHIASIS

STONES IN GALL BLADDER

→ SPECIMEN – PEAR SHAPED ORGAN ABOUT 7-8 cms LONG AND 3CMS WIDTH AT WIDEST PART.

→ IT HAS 3 PARTS:

1) NECK – CONSTRICTED PART
2) BODY – ATTACHED TO NECK
3) FUNDUS – ROUND PART AT ONE END

→ GALL BLADDER IS ALREADY CUT OPEN SHOWING MULTIPLE DARK (YELLOW) STONES.

→ TYPES OF GALL STONES: 1) PURE / CHOLESTEROL ⇒ PALE YELLOW, ROUND-OVAL; FINELY GRANULAR & HARD EXTERNAL SURFACE

2) PIGMENT ⇒ BLACK → FRIABLE, SPICULATED & MOULDED
BROWN → LAMINATED, SOFT; SOAPLIKE/GREASY CONSISTENCY

3) MIXED

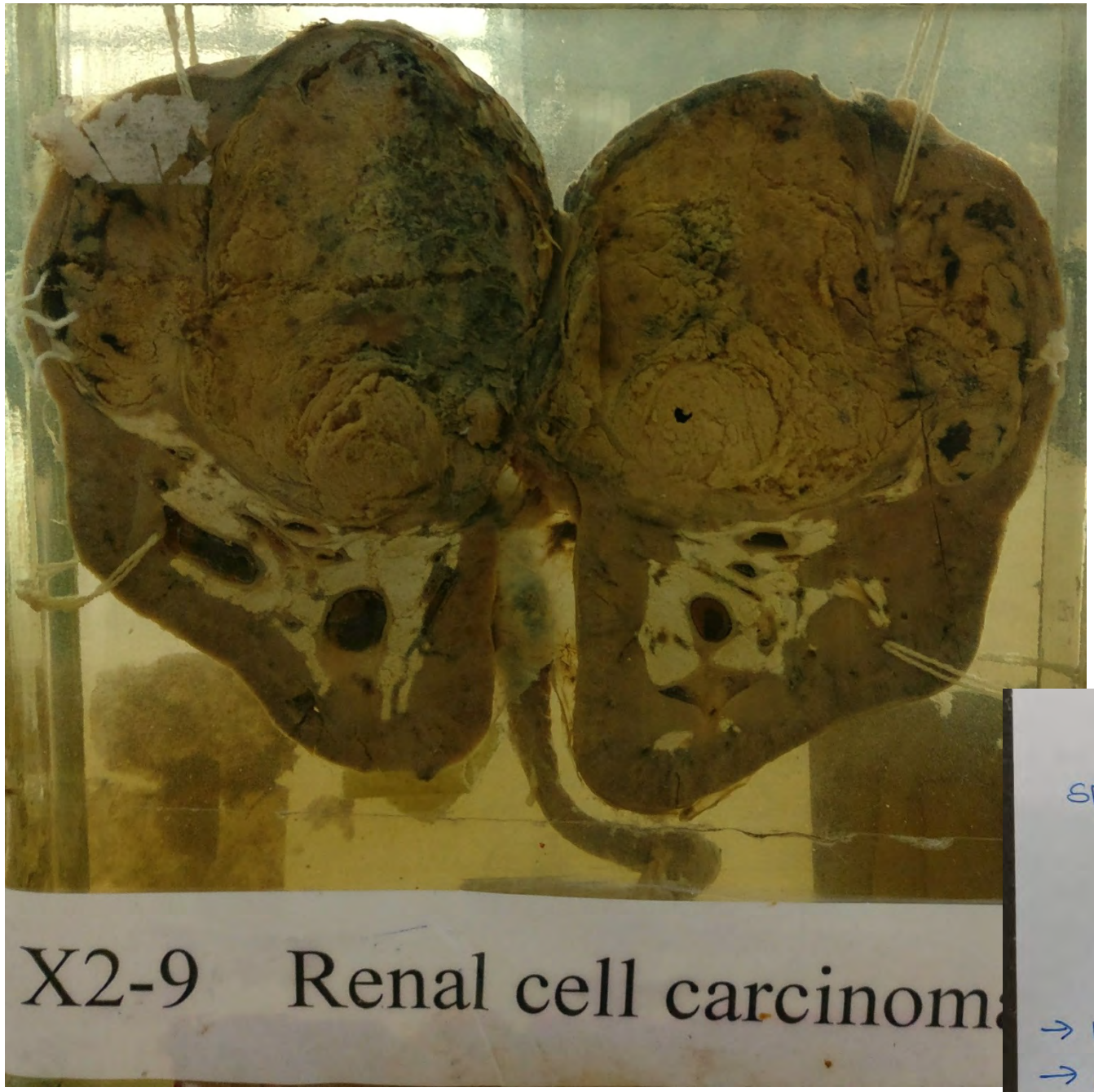
NEPHROLITHIASIS

STONES IN KIDNEY

→ SPECIMEN — KIDNEY m/s 10x5 cm.
EXTERNAL SURFACE — IRREGULAR
C/S → LOSS OF CORTICOMEDULLARY DIFFERENTIATION
DILATED PELVICALYCEAL SYSTEM.
MULTIPLE G/W SMOOTH ROUND STONES IN THE DILATED CALYCES m/s ABOUT 1 cm IN DIAMETER

→ TYPES : 1) CALCIUM OXALATE & PHOSPHATE (70%)
2) TRIPLE PHOSPHATE (5-10%) — PROTEUS / UREA SPLITTING BACTERIA
3) URIC ACID STONES (5-10%)
4) CYSTINE STONES (1-2%)
5) OTHERS

RENAL CELL CARCINOMA



RENAL CELL CARCINOMA

SPECIMEN — C/S OF KIDNEY C MASS M/S 7x5cms.

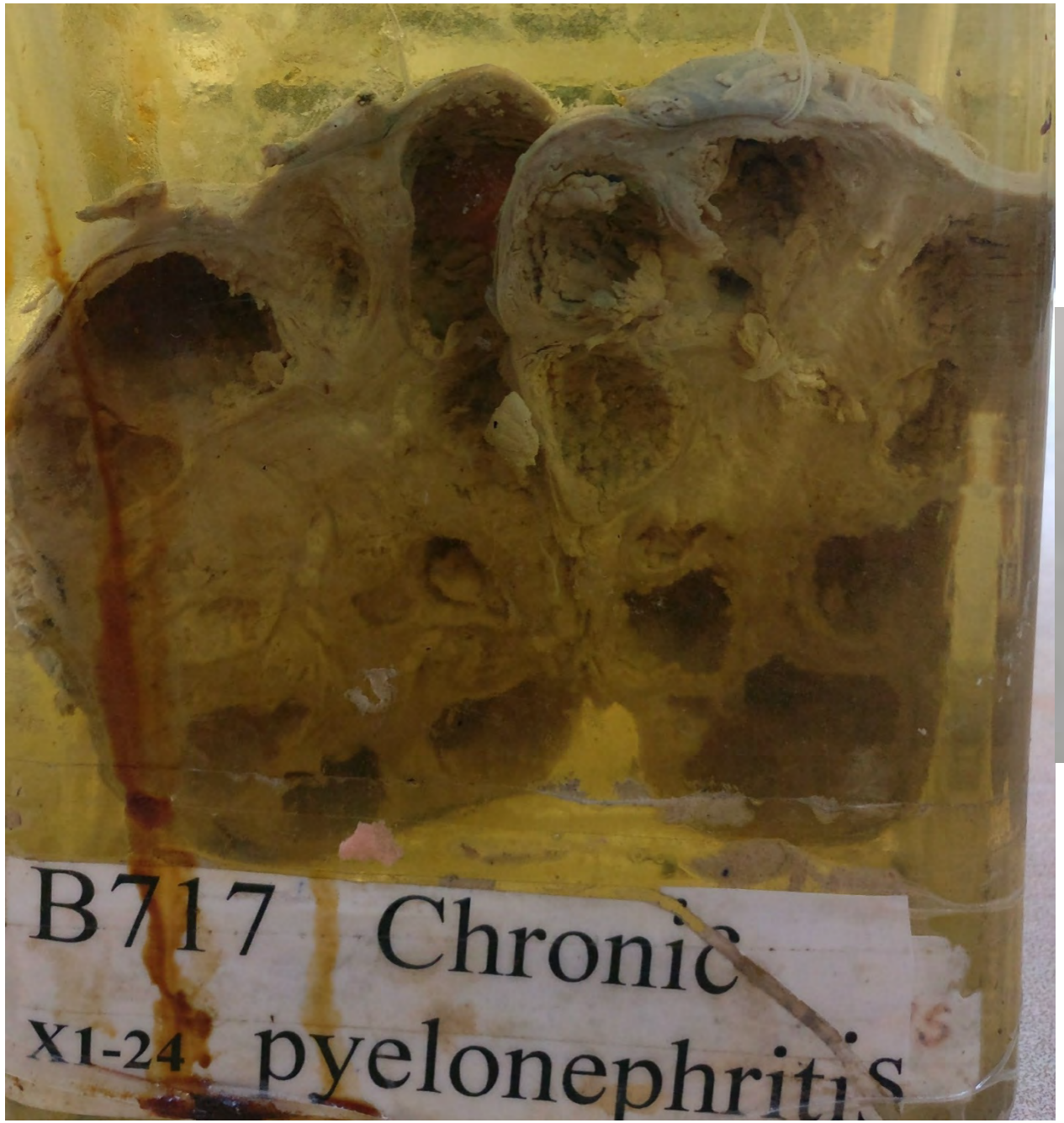
—TUMOR TISSUE INVOLVING ENTIRE KIDNEY M/S 6x5cms.

—AREAS OF NECROSIS & HEMORRHAGE SEEN

— DISTORTION OF PELVIS & CALYCES OF KIDNEY.

→ MOSTLY AFFECT POLES OF KIDNEY

→ MOST COMMON TYPE CLEAR CELL CARCINOMA ⇒ SOLITARY, UNILATERAL.



CHRONIC PYELONEPHRITIS

CHRONIC PYELONEPHRITIS

SPECIMEN — KIDNEY m/s 11x7cms

EXT. SURFACE — IRREGULAR, THICKENED &

CUT SECTION — THINNED OUT CORTEX

DILATED & BLUNTING OF CALYCES

PAPILLAE APPEAR BLUNTED

OSTEOCLASTOMA

OSTEOCLASTOMA

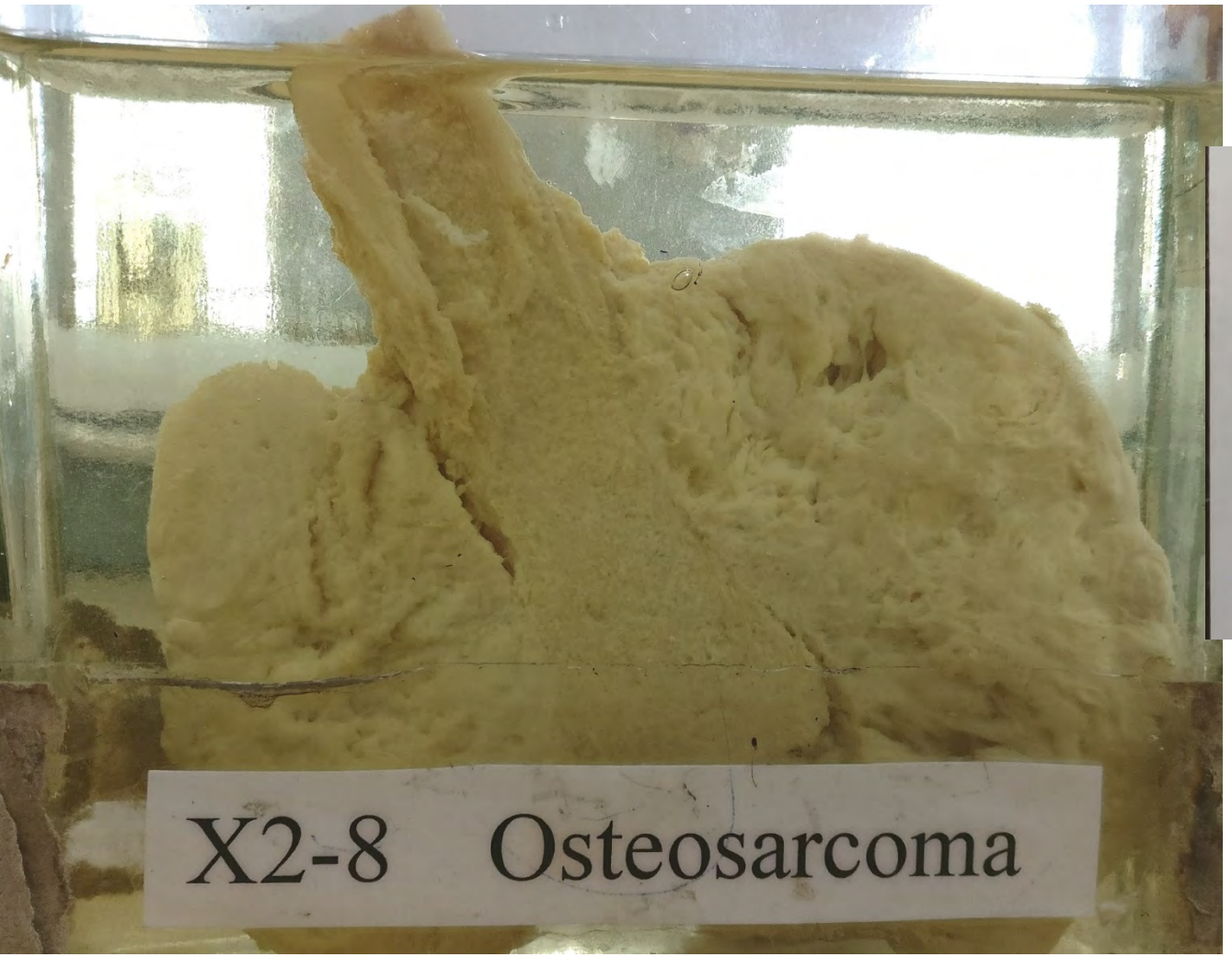
SPECIMEN — LOWER END OF FEMUR m/s 16x8x3 cms WITH THE ATTACHED MUSCLES.

— MASS TO ONE END m/s 8x7x3 cms.

CUT SECTION — HEMORRHAGIC AREAS WITH MULTIPLE CYSTS.

LARGER CYST m/s 2.5x2 cms.

OSTEOSARCOMA



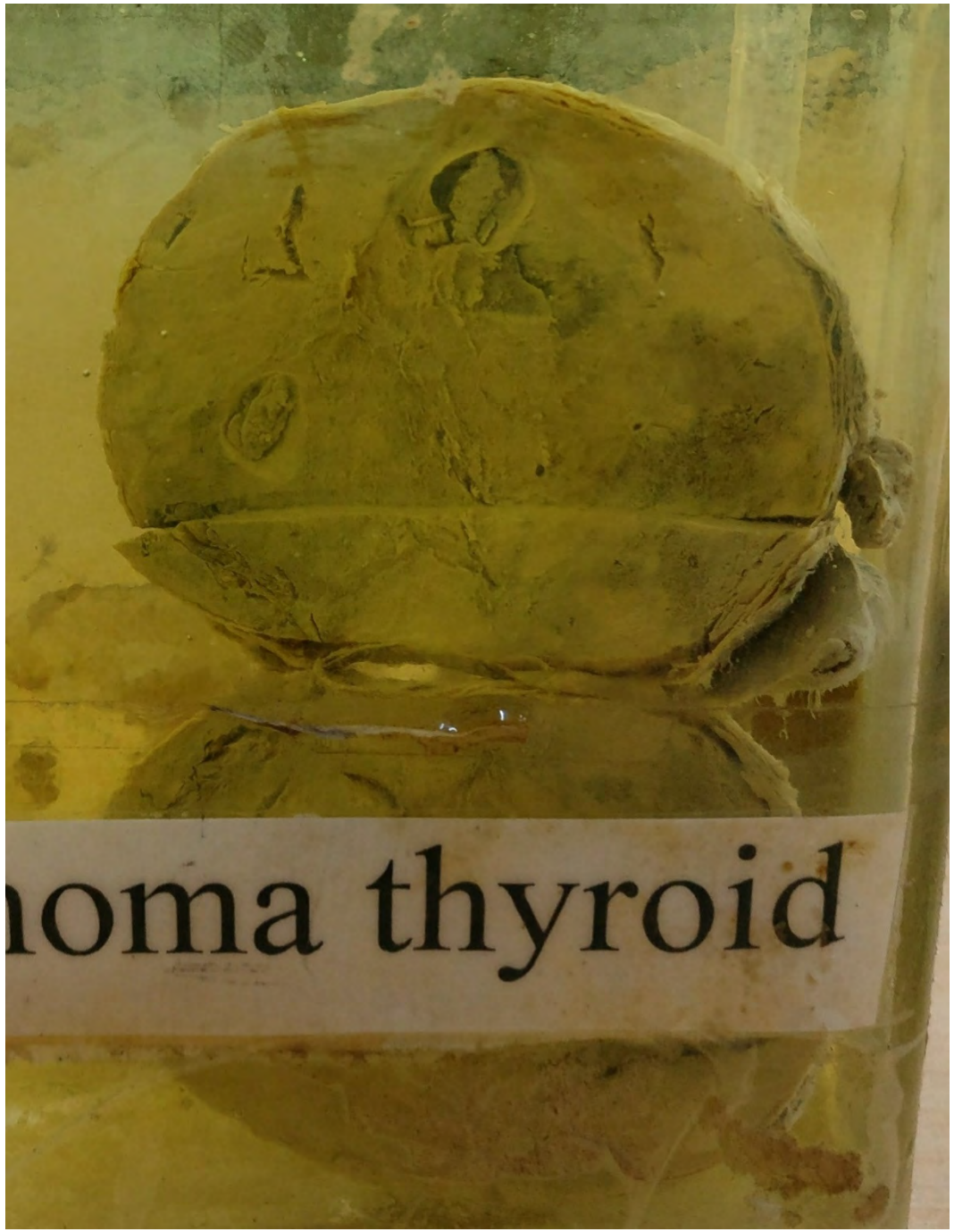
OSTEOSARCOMA

SPECIMEN ⇒ LOWER END OF FEMUR ℂ THE MASS m/s 8X10X2cms.

– NODULAR MASS PRESENT ON EITHER SIDE OF BONE m/s 8X4cms & 5X3 cms.

CUT SECTION – HOMOGENOUS GREY WHITE AREA

→ BULKY TUMOR ; GRITTY , GREY-WHITE.



ADENOMA THYROID

ADENOMA THYROID

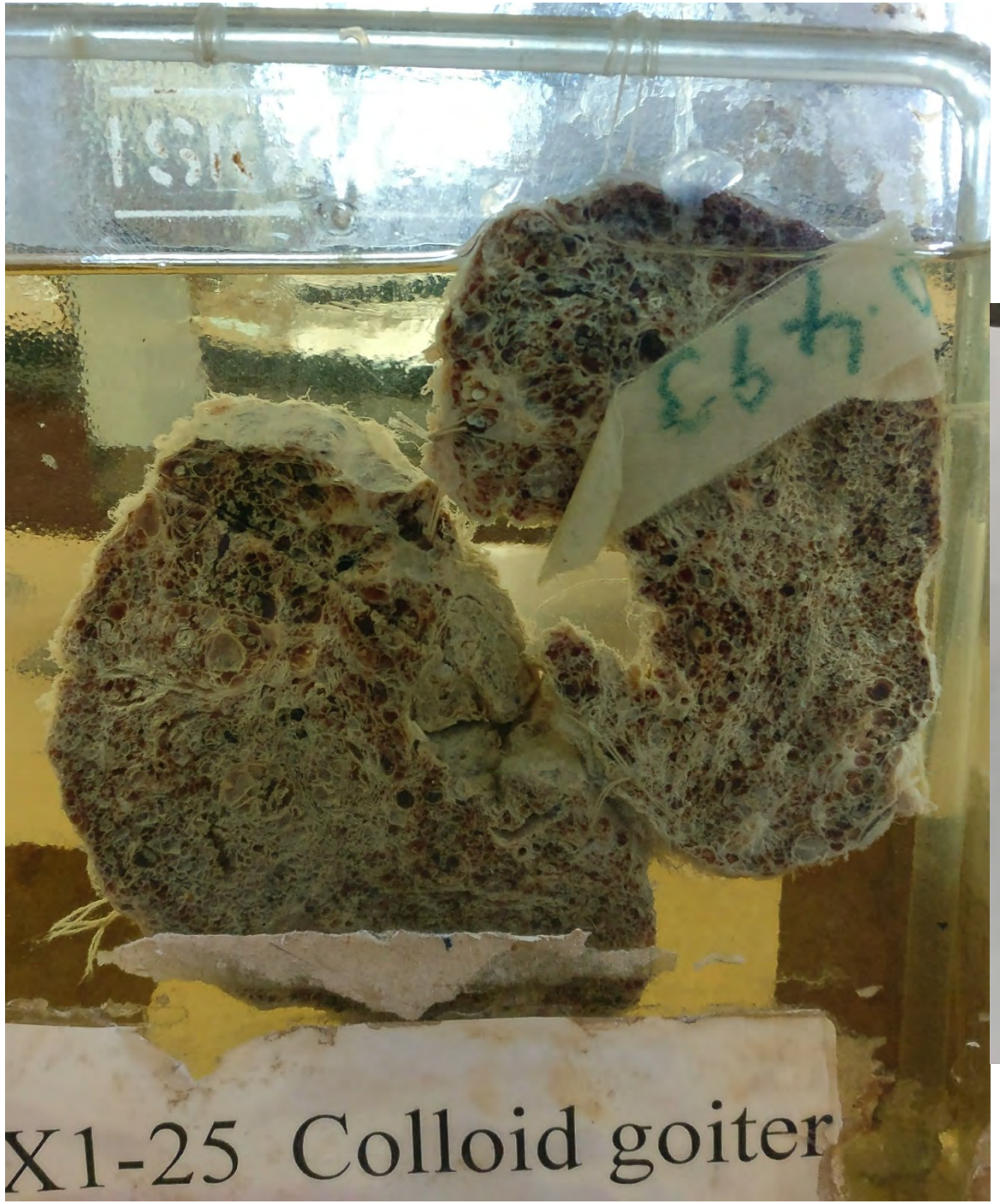
1. SOLITARY, ENCAPSULATED GRAY-WHITE ~~-~~ GRAY-BROWN LESION WITH ~~FOCAL~~ CYSTIC AREAS ~~OF NECROSIS~~ AND ADJACENT COMP. RESSED THYROID PARENCHYMA } - PROBABLY ~~ADENOMA~~ THYROID

2. ADENOMA THYROID -TYPICALLY DISCRETE, SOLITARY MASS ARISING FROM FOLLICULAR EPITHELIUM.

3. DEMARCATED FROM THE SURROUNDING THYROID PARENCHYMA BY WELL DEFINED INTACT CAPSULE. THEY COMPRESS THE SURROUNDING ADJACENT THYROID.

4. AVERAGE SIZE -3cm IN DIAMETER (SOME ARE >10cm)

5. AREAS OF HEMORRHAGE, FIBROSIS, CALCIFICATION & CYSTIC CHANGE ARE COMMON.



COLLOID GOITER

COLLOID GOITER

1. ~~SOLITARY~~ DIFFUSELY AND SYMMETRICALLY ENLARGED LESION WITH CUT SECTION SHOWING BROWN, TRANSLUCENT CYSTIC SPACES - PROBABLY COLLOID GOITER.
2. SIMPLE GOITER CAUSES ENLARGEMENT THE ENTIRE GLAND WITHOUT PRODUCING NODULARITY.
3. BECAUSE THE ENLARGED FOLLICLES ARE FILLED WITH COLLOID, THE TERM COLLOID GOITER IS APPLIED.
4. THYROID GLAND IS DIFFUSELY AND SYMMETRICALLY ENLARGED - MODERATE INCREASE (RARELY EXCEEDS 150gm)
5. CUT SECTION- BROWN, SOMEWHAT GLASSY AND

SEMINOMA

SEMINOMA

BULKY GRAY WHITE MASS WITH SOLID, HOMOGENOUS LOBULATED CUT SURFACE WITH COMPRESSED TESTIS WITH ATTHACHED CORD - SEMINOMA

1. MOST COMMON TYPE OF GERM CELL TUMOR INVOLVING TESTIS
2. COMPRISES 50% OF GERM CELL TUMORS
3. PEAK AGE INCIDENCE - THIRD DECADE
4. IDENTICAL TUMOR IN OVARY - DYSGERMINOMA
5. PRODUCE BULKY MASS (SOMETIMES 10 TIMES THE SIZE OF NORMAL TESTIS)
6. CUT SECTION - SOLID, HOMOGENOUS, GRAY WHITE/LIGHT YELLOW LOBULATED CUT SURFACE.
7. USUALLY DEVOID OF HEMORRHAGE OR NECROSIS.

TERATOMA

TERATOMA — SPECIMEN OF CUT OPEN TESTICULAR MASS WITH INTACT TUNICA VAGINALIS AND HETEROGENOUS CORD M/S TINY, 10 x 6 cm

1. LARGE, GRAY WHITE MASS WITH MULTIPLE CYSTIC SPACES AND INTERSPERSED CHALKY WHITE AREAS (CALCIFICATION) WITH ATTACHED CORD - PROBABLY TERATOMA

2. TERATOMA REFERS TO TUMORS HAVING VARIOUS CELLULAR OR ORGANOID COMPONENTS REMINISCENT OF THE NORMAL DERIVATIVES OF MORE THAN 1 GERM LAYER.

3. MAY OCCUR AT ANY AGE → INFANCY TO ADULT LIFE.

4. PURE FORMS COMMON IN INFANTS AND CHILDREN.

5. IN ADULTS - PURE FORMS ARE RARE. MIXED GERM CELL TUMORS ARE COMMON.

VESICULAR MOLE

VESICULAR MOLE

1. THIS IS CUT OPEN HYSTERECTOMY SPECIMEN WITH CUT SECTION SHOWING MASS OF GRAPE LIKE VESICLES - PROBABLY VESICULAR MOLE
2. CHARACTERISED BY HYDROPIC SWELLING OF THE MAJORITY OF VILLI. (ENLARGED, EDEMATOUS VILLI)
3. SWOLLEN VILLI MAY RANGE FROM FEW mm TO 3cm IN DIAMETER (AVERAGE ABOUT 1.5cm)
4. CLASSIC APPEARANCE OF HYDROPIC VILLI - DELICATE, FRIABLE MASS OF THIN WALLED, TRANSLUCENT, CYSTIC GRAPE LIKE STRUCTURES.
5. ASSOCIATED WITH INCREASED RISK OF PERSISTENT TROPHOBLASTIC DISEASE.

DERMOID CYST

DERMOID CYST

1. THIS IS HYSTEROSALPINGO-OOPHORECTOMY SPECIMEN WITH CYSTIC MASS ATTACHED TO OVARY.
2. CYSTIC MASS SHOWING UNILOCULATED CAVITY FILLED WITH HAIR; ARISING FROM THE WALL AND PROJECTING IN TO THE CAVITY IS A PROTRUBERANCE (ROKITANSKY/DERMOID PROTRUBERANCE) FROM WHICH TEETH & BONE ARE ARISING.
3. SO THIS IS MOSTLY MATURE CYSTIC TERATOMA/DERMOID CYST.
4. THE TUMOR COMPOSED OF WELL DIFFERENTIATED DERIVATIVES OF 3 GERM LAYERS – ECTO, MESO & ENDODERM WITH ECTODERMAL ELEMENTS PREDOMINATING.
5. COMPRISES 20% OF ALL OVARIAN NEOPLASMS.
6. VARIES IN SIZE FROM VERY SMALL (0.5CM) – LARGE (up to 40cm) BUT >90% ARE <15cm.

LEIOMYOMA

LEIOMYOMA

1. THIS IS HYSTERECTOMY SPECIMEN WITH LUMEN FILLED ~~WITH~~ BY SHARPLY CIRCUMSCRIBED, ROUND, FIRM, GRAY-WHITE MASS WITH CUT SECTION OF WHORLED APPEARANCE - PROBABLY LEIOMYOMA.
2. LEIOMYOMA - BENIGN SMOOTH MUSCLE NEOPLASM, THAT MAY OCCUR SINGLY, BUT MORE OFTEN ARE MULTIPLE.
3. CAN OCCUR - WITHIN THE MYOMETRIUM (INTRA MURAL)
   - JUST BENEATH THE ENDOMETRIUM (SUB MUCOSAL)
   - BENEATH THE SEROSA (SUB SEROSAL)


MELANOMA FOOT


NFARCTION SPLEE


1 LIPOMA


3 DRY GANGRENE


A462 Wet gangrene


6 MYECTOMA FOOT


12 CVC LIVER


10 FATTY LIVER


Squamuos cell carcinoma


7 FIBROMA


TB LYMPHNODE MA


A347 Hydati cyst


8 SEQUESTRUM


ACUTE APPENDICITI


683
26 POLYCYSTIC KIDNEY


TB INTESTINE


ADENO CARCINOMA STOMACH


Cirrhosis Of Liver


B20
X1-18
Bronchiectasi


21 AMOEBIC LIVER ABSCESS


PHOID ULCER


23 TB LUNG


ATHEROSCLEROSIS


Mitral stenosis


CHRONIC GASTRIC ULCE


39 DERMOID CYST

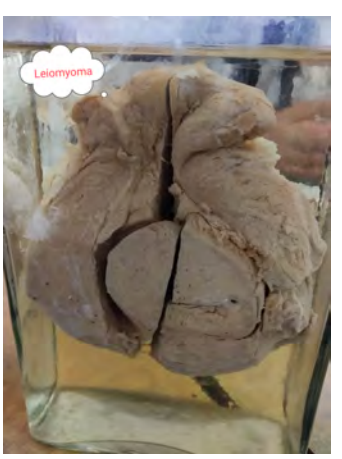

X1-25 Colloid goiter


B371
X2-12
Teratoma


Seminoma

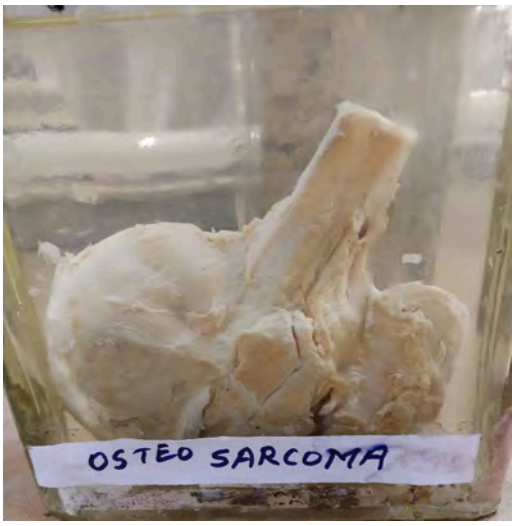

Hydatiform Mole
(Grape like
Vesicles)
38 VESICULAR MOLE


X1-25 Colloid goiter

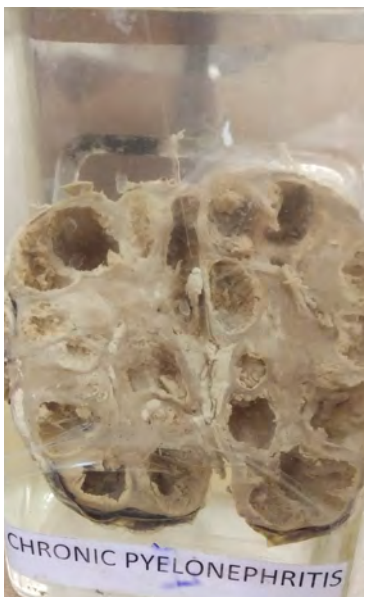

Leiomyoma


32 OSTEO CLASTOMA / GCT


Osteosarcoma

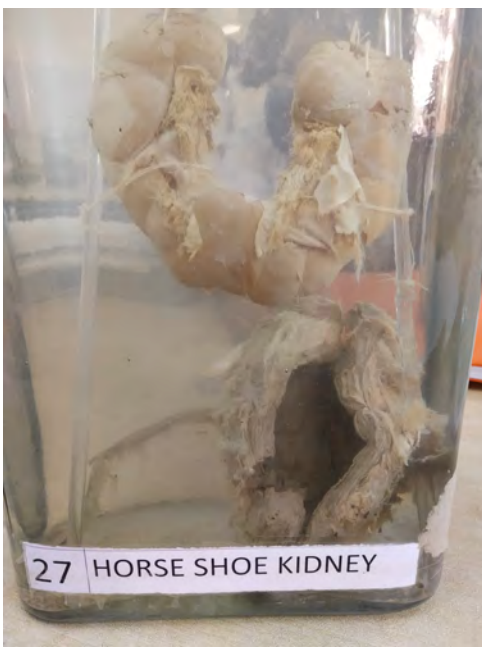

OSTEO SARCOMA

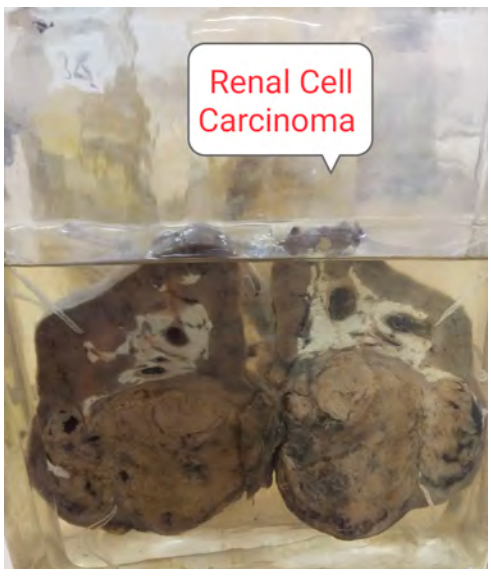

Adenoma thyroid


CHRONIC PYELONEPHRITIS


STONES IN KIDNEY


STONES IN GALL BLADDER


27 HORSE SHOE KIDNEY


Renal Cell Carcinoma