LEIOMYOMA OF UTERUS

- Synonyms: fibromyoma,fibroIeiomyoma,fibroid.
- PERHAPS MOST COMMON TUMOURS IN WOMEN
- Benign tumours of smooth muscle of uterus.

  Most have normal karyotypes
- Rearrangenent of chromosomes 12q14 and 6p involving HMGIC AND HMGIY genes
- Mutation in MED12 gene.
- Most common in 30-50 yrs

GROSS

- It may be single or multiple
- Variable size
- Solid but may become soft and cystic due to degeneration.
- Round,grey white
- Well circumscribed
- Occasionally pedunculated
- Calcification,haemorrhage,infarction etc due to other changes in large tumours


No. TMC/PATH/F.1.A

SPECIMEN F.1.D. UTERINE LEIOMYOMA (SUBMUCOSAL)

Gross: Hysterctomy specimen of uterus with cervix with a large submucosal mass. Cut section shows a firm, well circumscribed, greyish white mass with whorled areas.

SPECIMEN F.2.A. UTERINE LEIOMYOMA (SUBSEROSAL)

Gross : Hysterctomy specimen of Uterus with cervix. Cut section shows a firm, well circumscribed, greyish white mass just beneath the serosa having a whorled appearance.

SPECIMEN F.3.A. UTERINE LEIOMYOMA (INTRAMURAL)

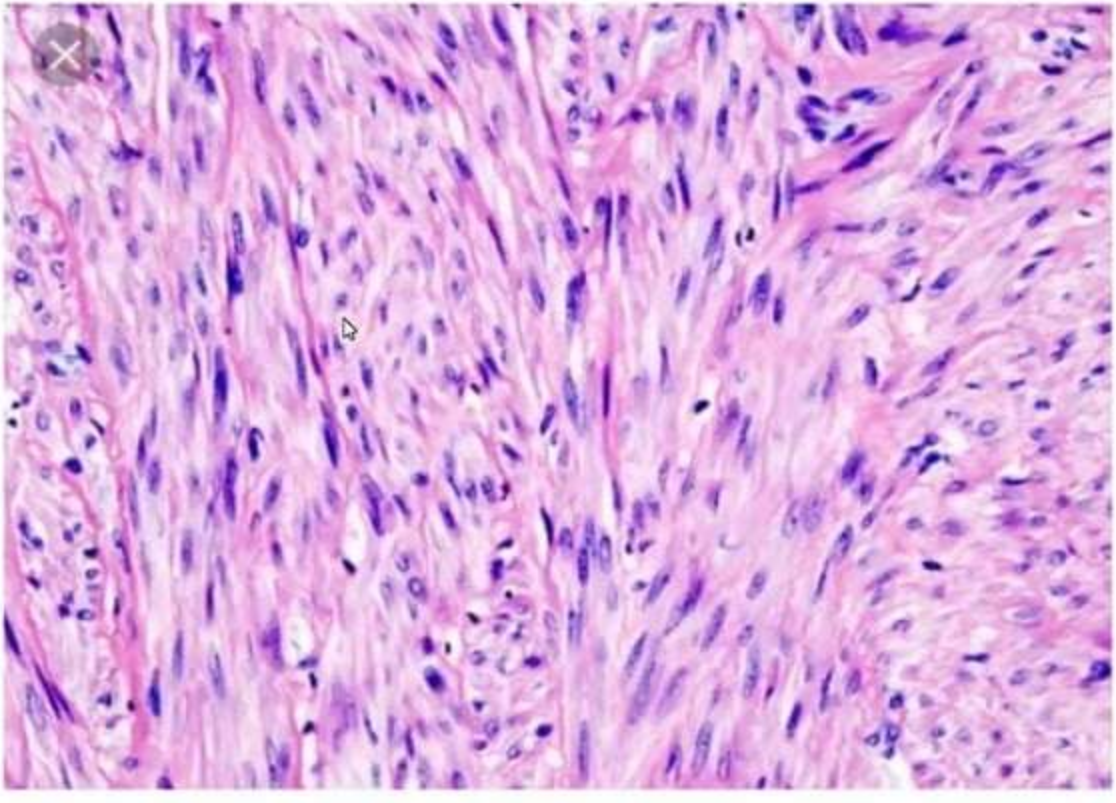
Gross: Cut open specimen of Uterus with cervix with thickening of endometrial wall. Cut section shows a firm, well circumscribed, greyish white mass having whorled areas in the myometrium .

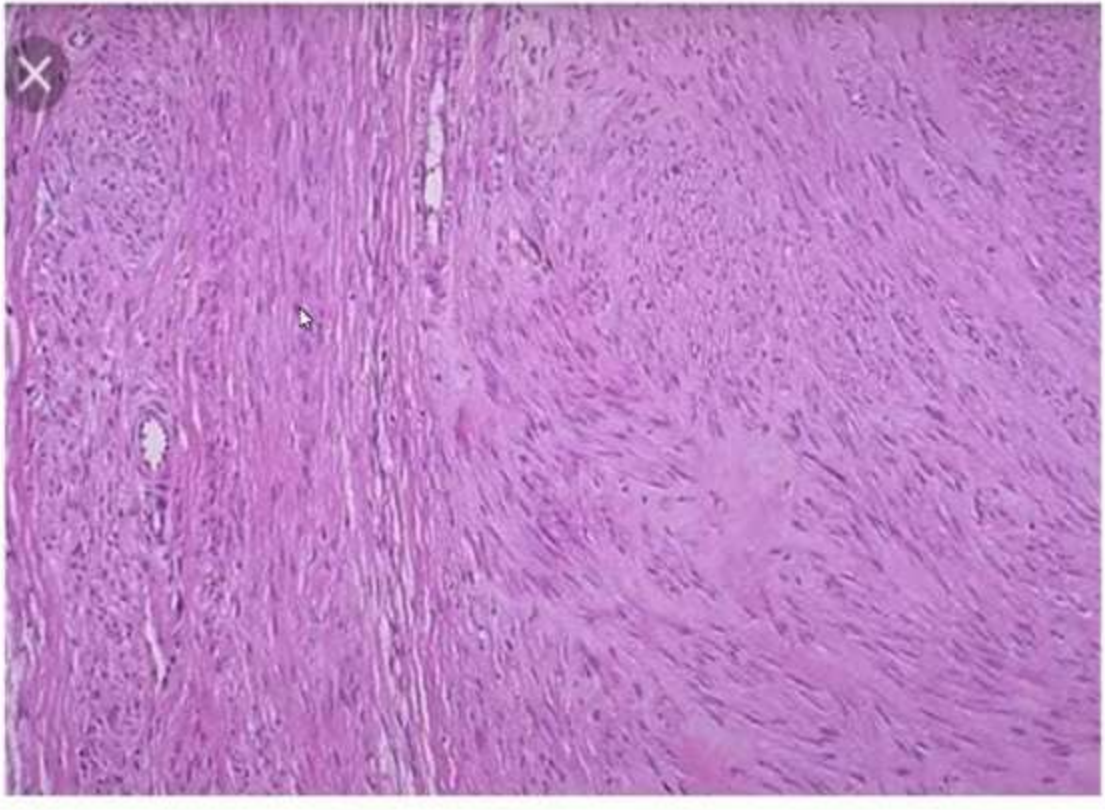
- Cut surface shows characteristic *whorled* appearance due to interlacing bundles of fibres
- Location:
  - —Within the myometrium (intramural)
  - —Just beneath the endometrium(submucosal)
  - —Beneath the serosa(subserosal)
  - —Rarely in the uterine ligaments,lower uterine segment or cervix
  - —Rarely it may detach and grow elsewhere-wandering leiomyoma or oarasitic leiomyoma

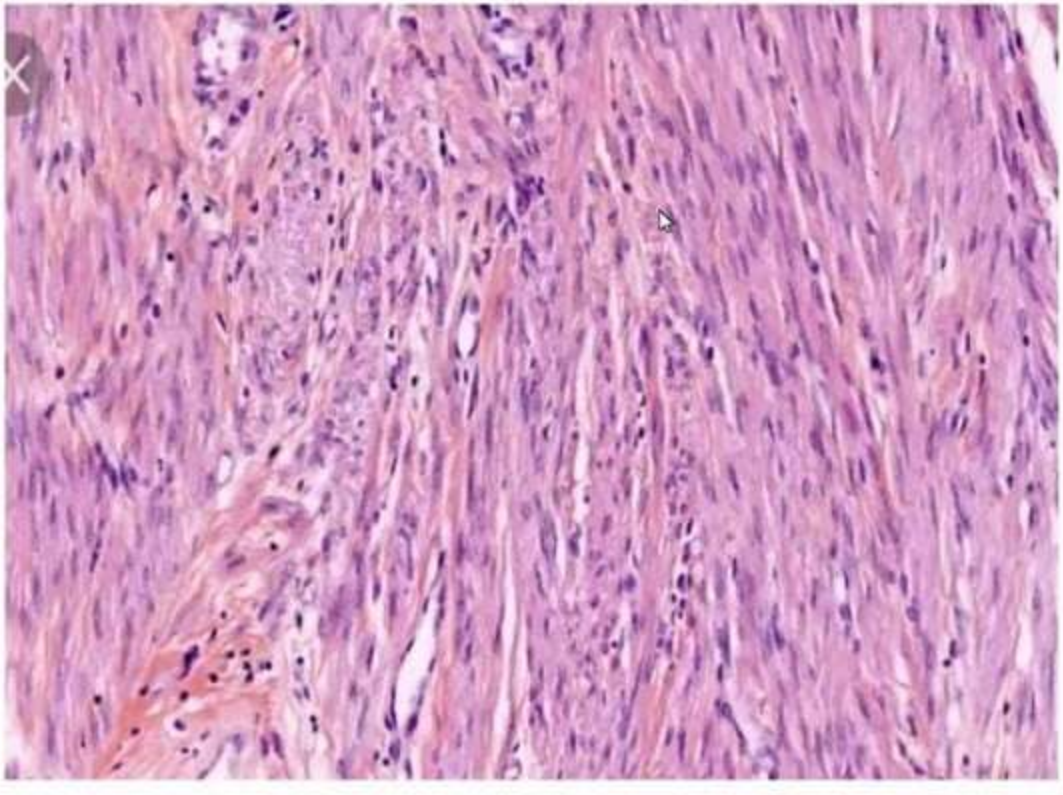
MICROSCOPY

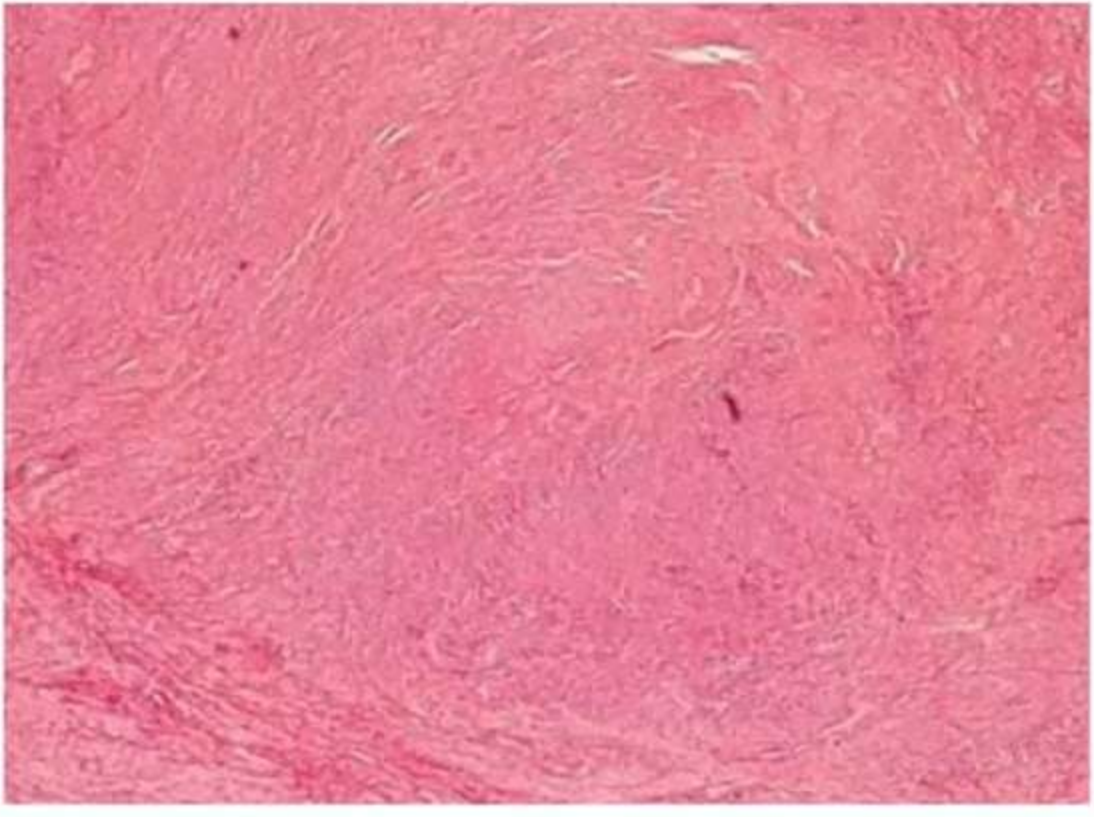
- Non striped smooth muscle fibres in irregular and interlacing bundles cut in various directions.
- Individual muscle cells are uniform in size and shape,have characteristic oval nucleus and long,slender bipolar cytoplasmic processes(cigar shaped nucleii)
- Mitotic figures are rare
- They take yellow colour in *Van Geison's stain*

- Muscle fibres intermingle with fibrous tissue.
- Fibrous tissue takes red stain with *Van Gieson's*
- Hyalinized areas can be seen around blood vessels









BENIGN VARIANTS OF LEIOMYOMA

- Leiomyoma with bizarre nucleii:it shows nuclear atypia and giant cells
- Cellular leiomyoma.
- Mitotically active leiomyoma
- Myxoid leiomyoma
- Epithelioid leiomyoma

LEIOMOMA

Whorled pattern of smooth musde bundles

SMOOTH MUSCLE CELLS

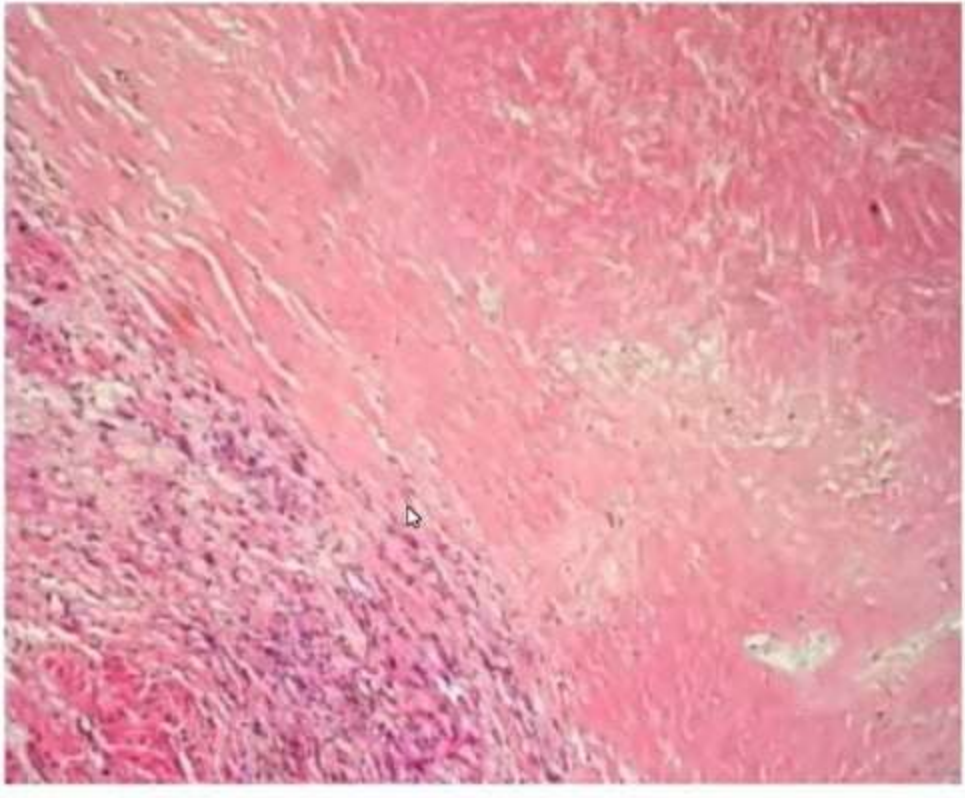
Elongated/spindla shaped cells with eosinophllic cytoplasm and oval to elongated nuclei with blunt end(CIGAR shaped)

Interlacing fascicles

- Intravenous leiomyomatosis-uterine leiomyoma that extends to blood vessels and spreads hematogenously to other sites,most commonly the vena cava and right attrium
- Disseminated peritoneal leiomyomatosis- multiple small peritoneal nodules

DEGENERATIONS IN LEIOMYOMA

- RED DEGENERATION/CARNEOUS DEGENERATION: coagulative necrosis seen specially in pregnancy due to venous thrombosis or rupture of intra tumoral arteries It is usually associated with pain.
- CYSTIC DEGENERATION: It is an extreme sequale of edema where large and small cystic spaces appear in the edematous,acellular centre.



DEGENERATIONS IN LEIOMYOMA

- HYALINE DEGENERATION-presence of homogenous eosinophillic plaques in extra cellular space due to deposition of proteinaceous material
- MYXOID DEGENERATION:gelatinous intratumoral foci visible at grossing that contain hyaluronic acid rich mucopolysaccharides