LEIOMYOMA (FIBROID)

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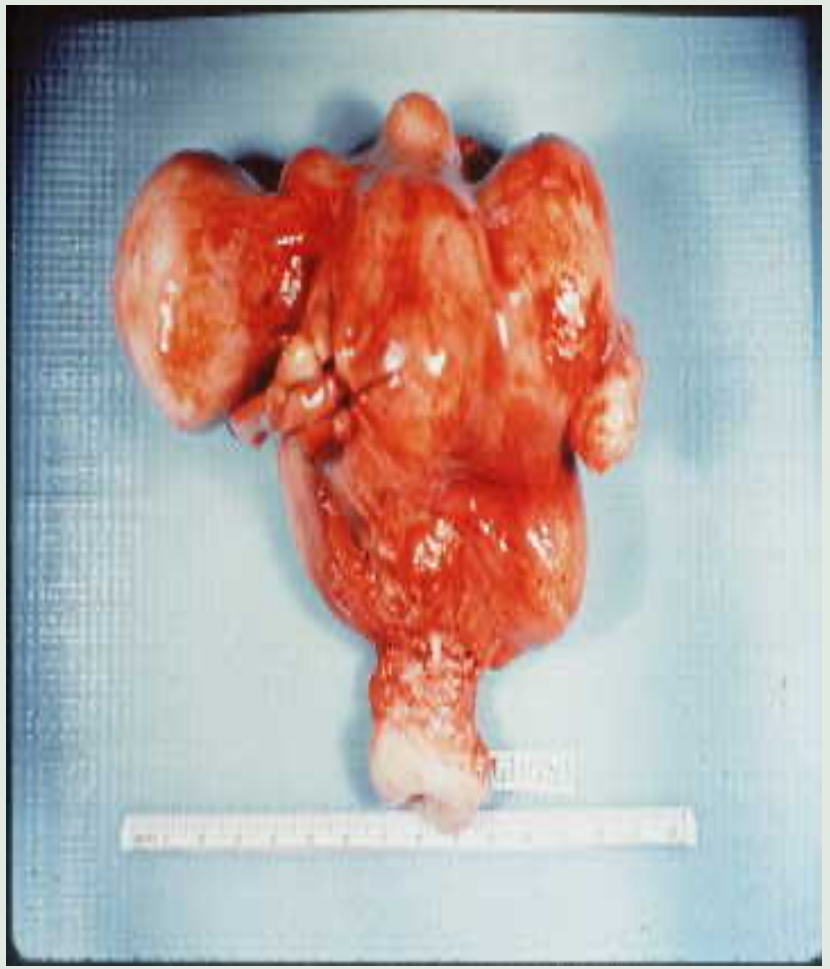
Epidemiology

- **The commonest of all pelvic T. (1/3).**
- **20% of female > 30y do have fibroid.**
- **Childbearing period**
- Often enlarge during pregnancy or during oral contraceptive use, and regress after menopause

ETIOLOGY

- ✓Uterus deprived from a baby consoles itself with a fibroid.
- ✓Unknown etiology- may be single cell hyperplasia theory.
- ✓Hyper-estrogenic states
- ✓Infertility causal relationship
- ✓Mechanical stress (Lateral wall stress, fundus)



Pathology

-**Site** : intrauterine, extrauterine - **Shape**: variable, principally spherical

- **Size**: Variable from seadling to huge size

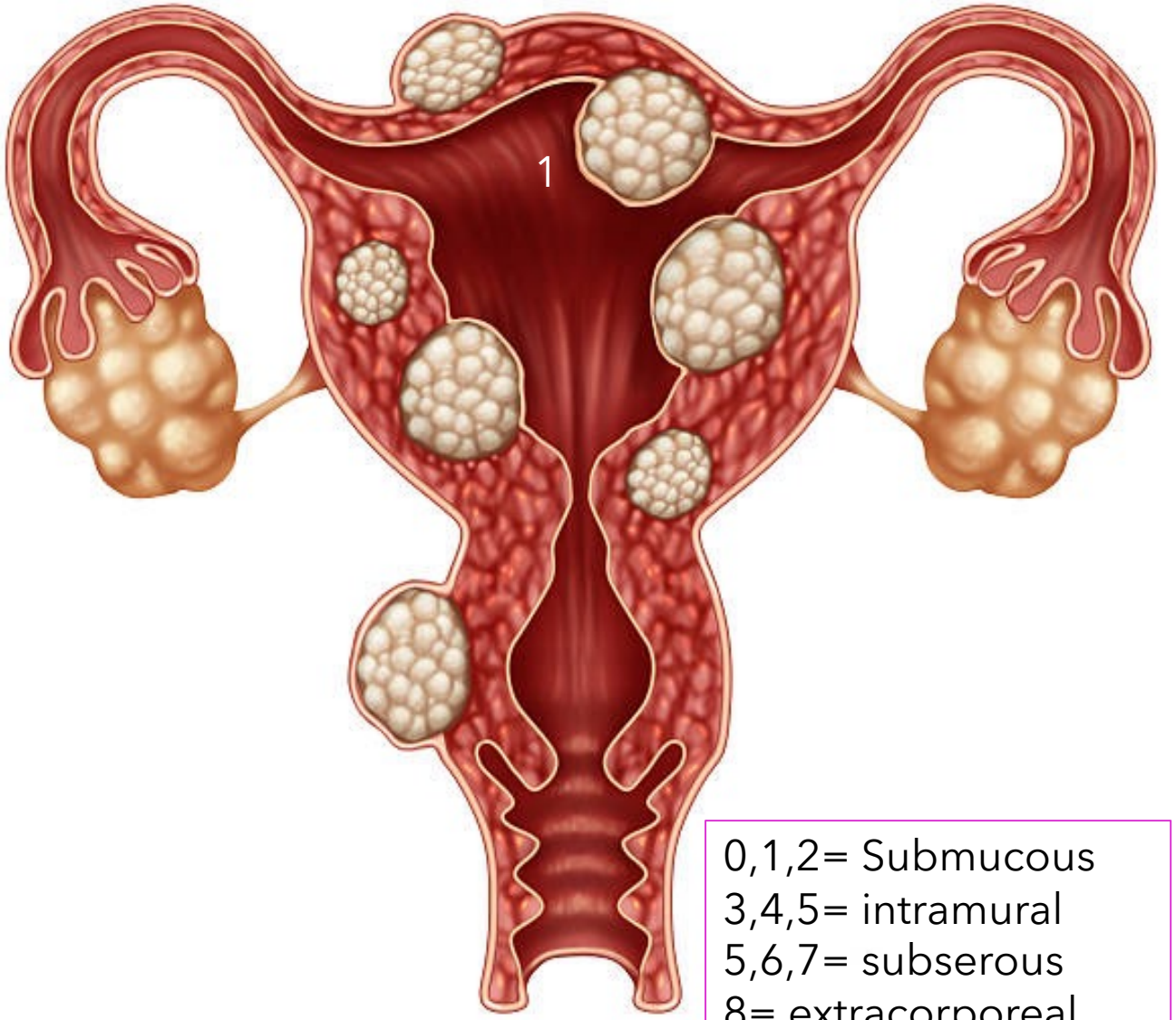
- **Consistency**: firm rubbery except if degenerated

- Cut section: Whorely appearance except if degenration

- **Capsule:** Pseudo-capsule formed from compressed myometrial fibers

- **Number:** may be single, but usually multiple

- **Varieties**: Subserous-Intramural- Submucous-Extrauterine /FIGO



0,1,2= Submucous
3,4,5= intramural
5,6,7= subserous
8= extracorporeal

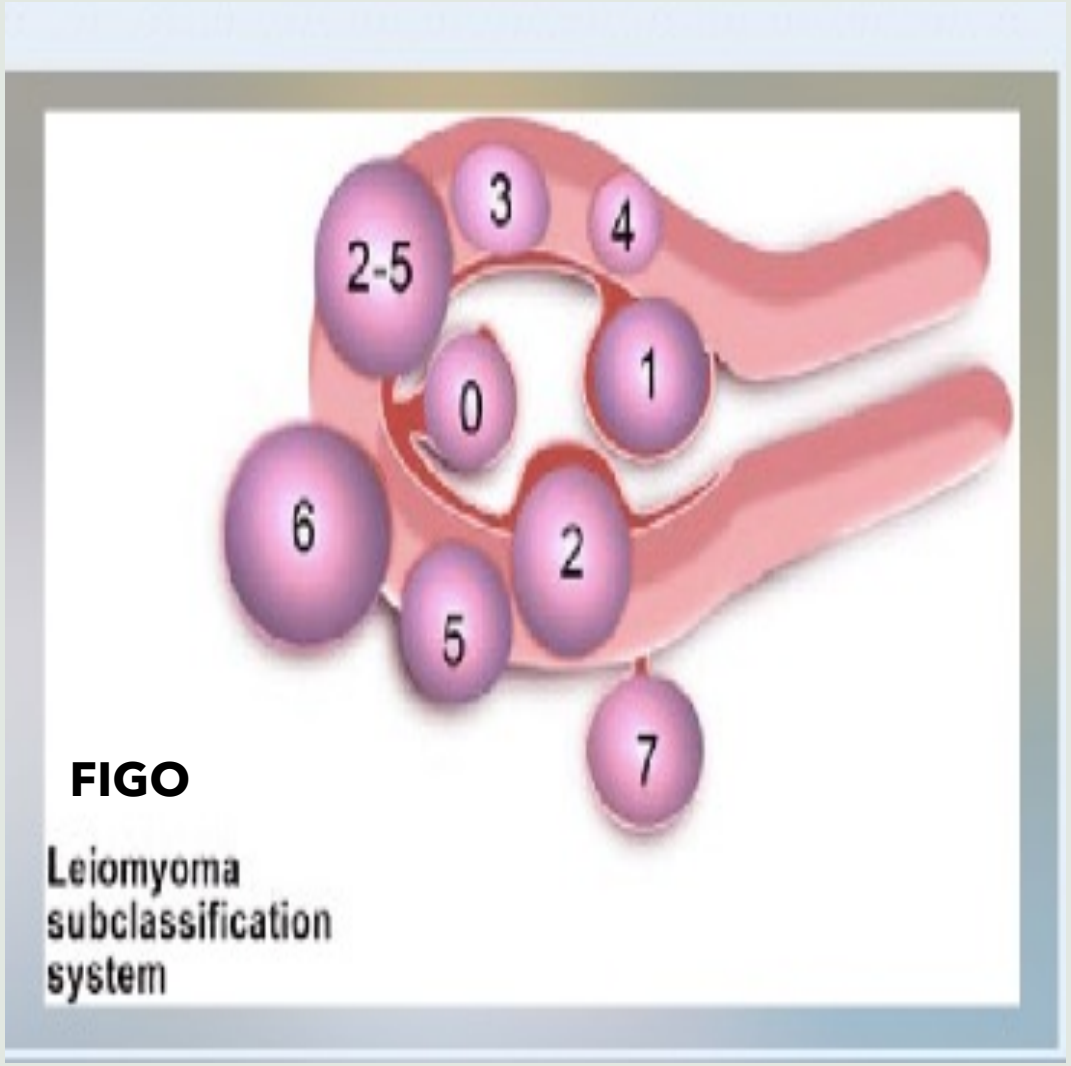


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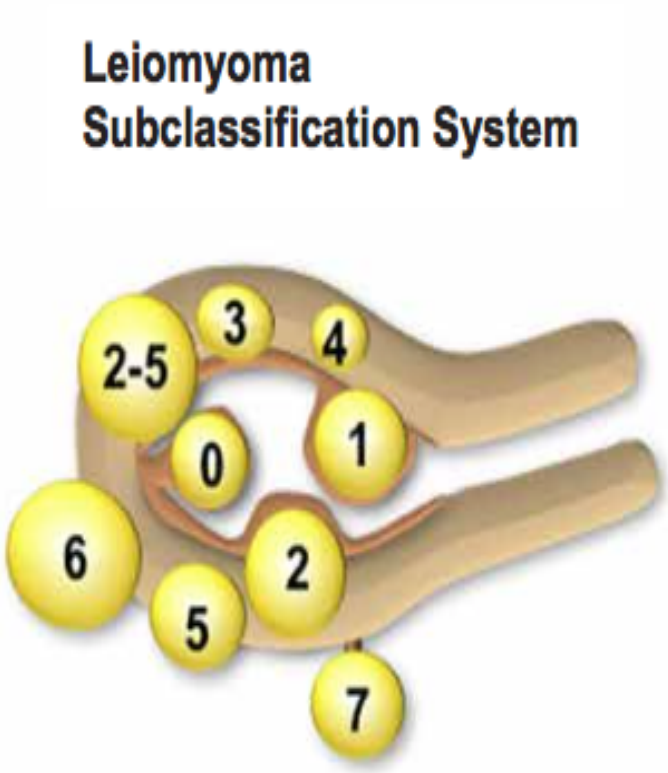
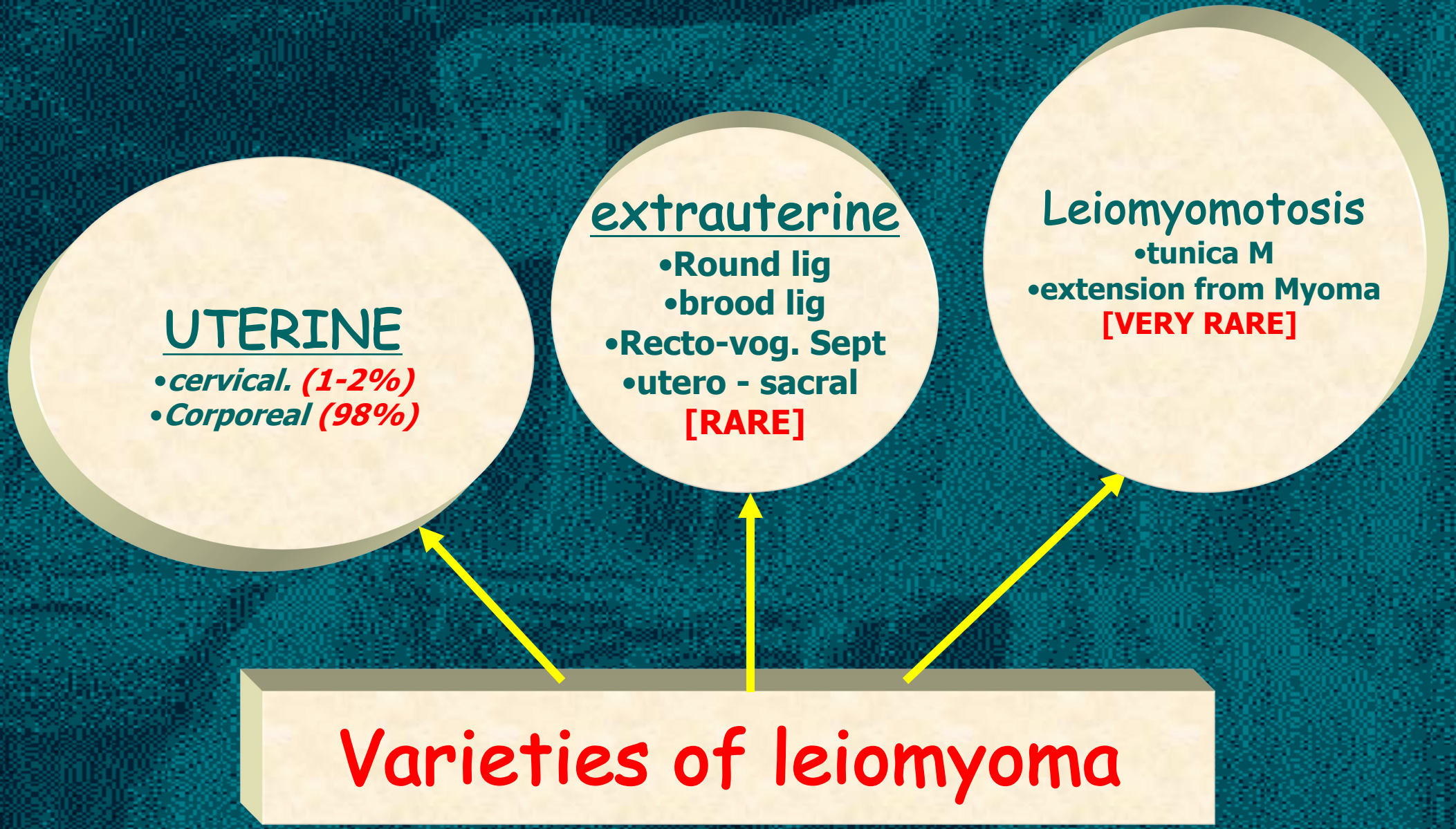
Figure 1. The FIGO leiomyoma subclassification system[12]



S – Submusosal	0	Pedunculated intracavitary
	1	< 50% intramural
	2	≥ 50% intramural
O – Other	3	Contacts endometrium; 100% intramural
	4	Intramural
	5	Subserosal ≥ 50% intramural
	6	Subserosal < 50% intramural
	7	Subserosal pedunculated
	8	Other (specify e.g. cervical, parasitic)

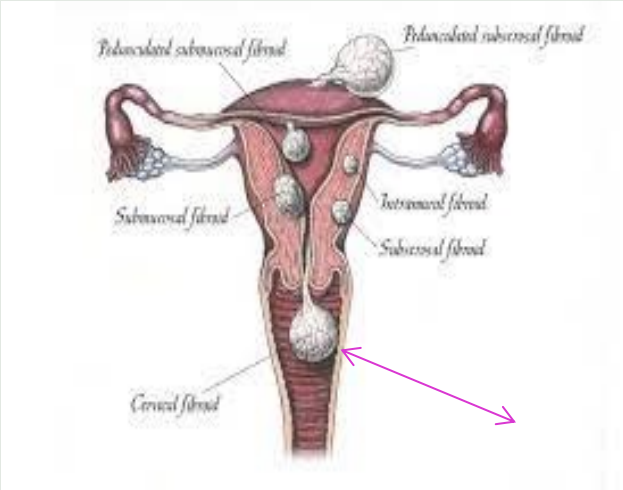
Hybrid leiomyomas (impact both endometrium and serosa)	Two numbers are listed separated by a hyphen. By convention, the first refers to the relationship with the endometrium while the second refers to the relationship to the serosa. One example is below	
	2-5	Submusocal and subserosal, each with less than half the diameter in the endometrial and peritoneal cavities, respectively.


UTERINE
•cervical. (1-2%)
•Corporeal (98%)
extrauterine
•Round lig
•brood lig
•Recto-vog. Sept
•utero - sacral
[RARE]
Leiomyomotosis
•tunica M
•extension from Myoma
[VERY RARE]
Varieties of leiomyoma

Cervical leiomyoma

Portiovaginalis

- small
- sessile
- polypoid



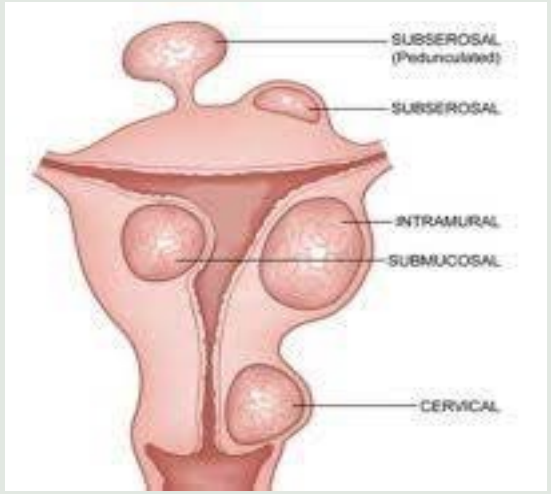
Supravaginal cervix

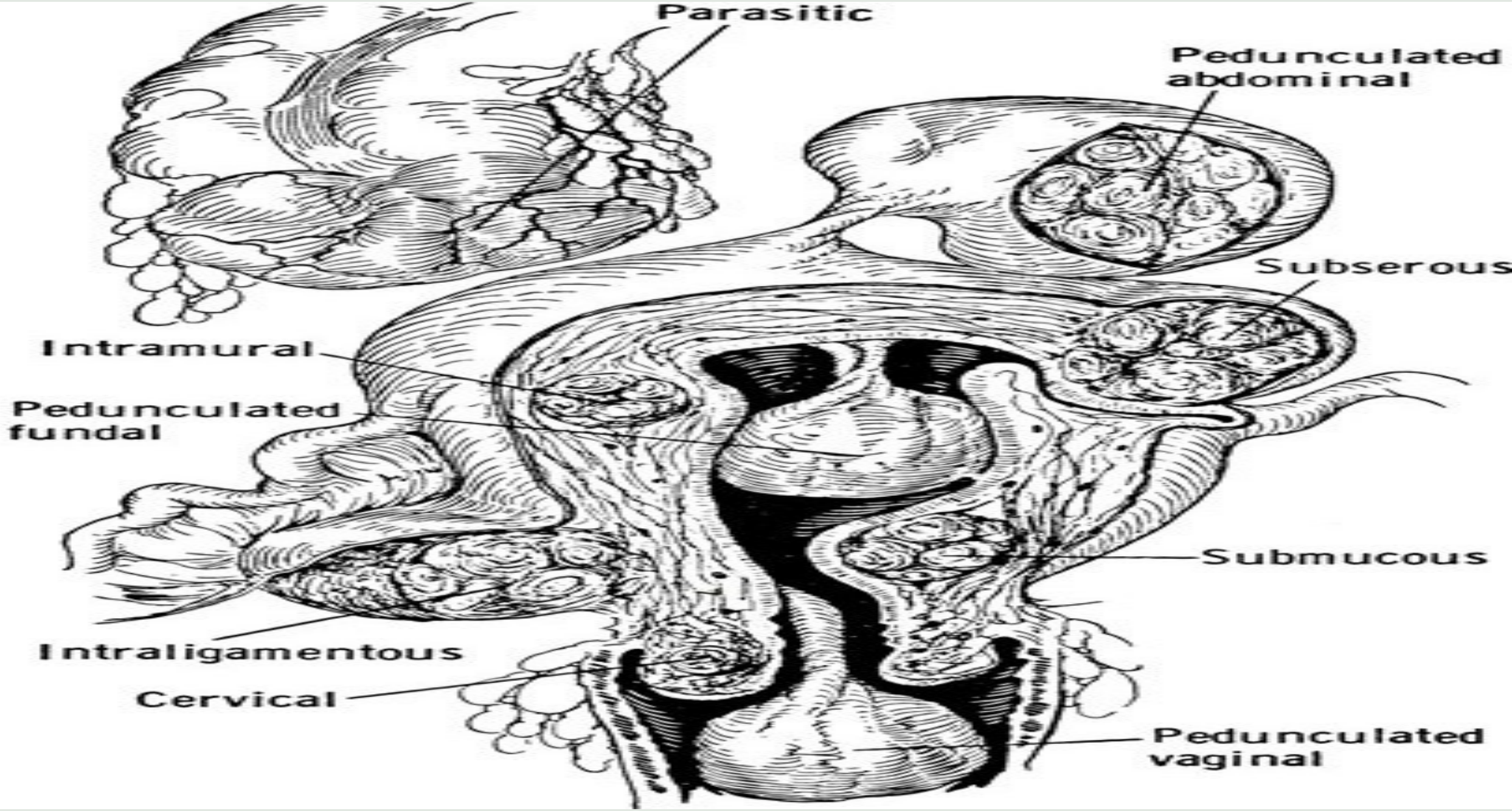
true

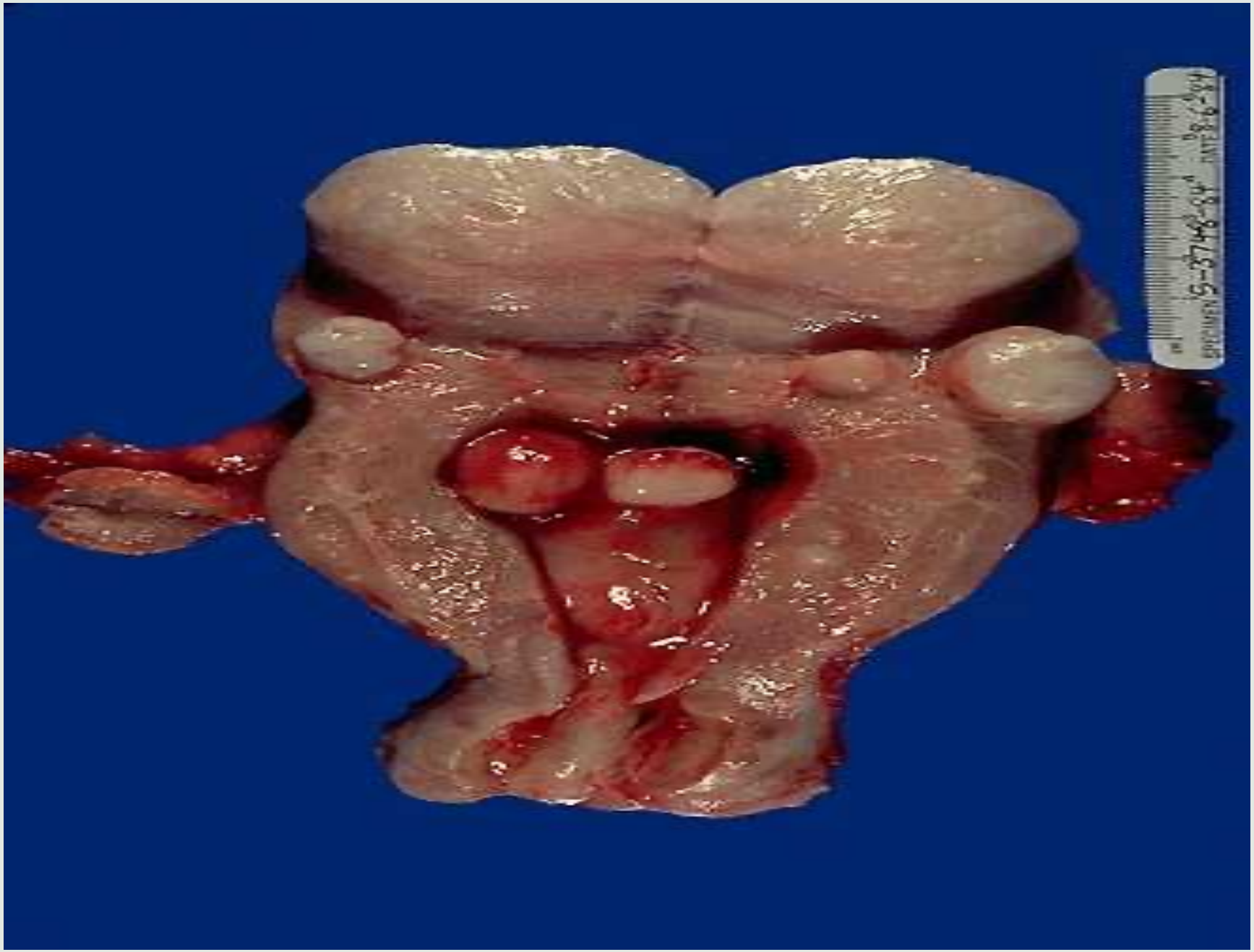
(ant - post - central - combined)

false

(intralig - retraperit- not capsulated)




Parasitic
Pedunculated abdominal
Subserous
Intramural
Pedunculated fundal
Submucous
Intraligamentous
Cervical
Pedunculated vaginal



PATHOLOGICAL CHANGES

1- Hyaline degenration- most common
2- Myxoid degenration
3- Cystic degeneration- cellular fibroid, high recurrence rate
4- Red degeneration- associating pregnancy causing pain
5- Calcification
6- Atrophic degeneration
7- Necrotic degeneration- pedunculated fibroid
8- Malignant transformation (Leiomyosarcoma) in less than 0.5% of cases.

DIAGNOSIS

- History-symptoms
- Examination.
- Investigation.
- D.D.

SYMPTOMS

Leiomyoma can present with one or more of the gynecological complaints:

1- Bleeding per vagina: most common with submucous fibroids (0,1,2 types). May be heavy menstrual bleeding (menorrhagia) or irregular acyclic bleeding (metrorrhagia) if complicated.

2- Mass: it causes pelviabdominal swelling.

3-Pain; pelvic colicky pain or dull aching pain especially if complicated. Dyspareunea, urinary or lower GIT pressure sympt.

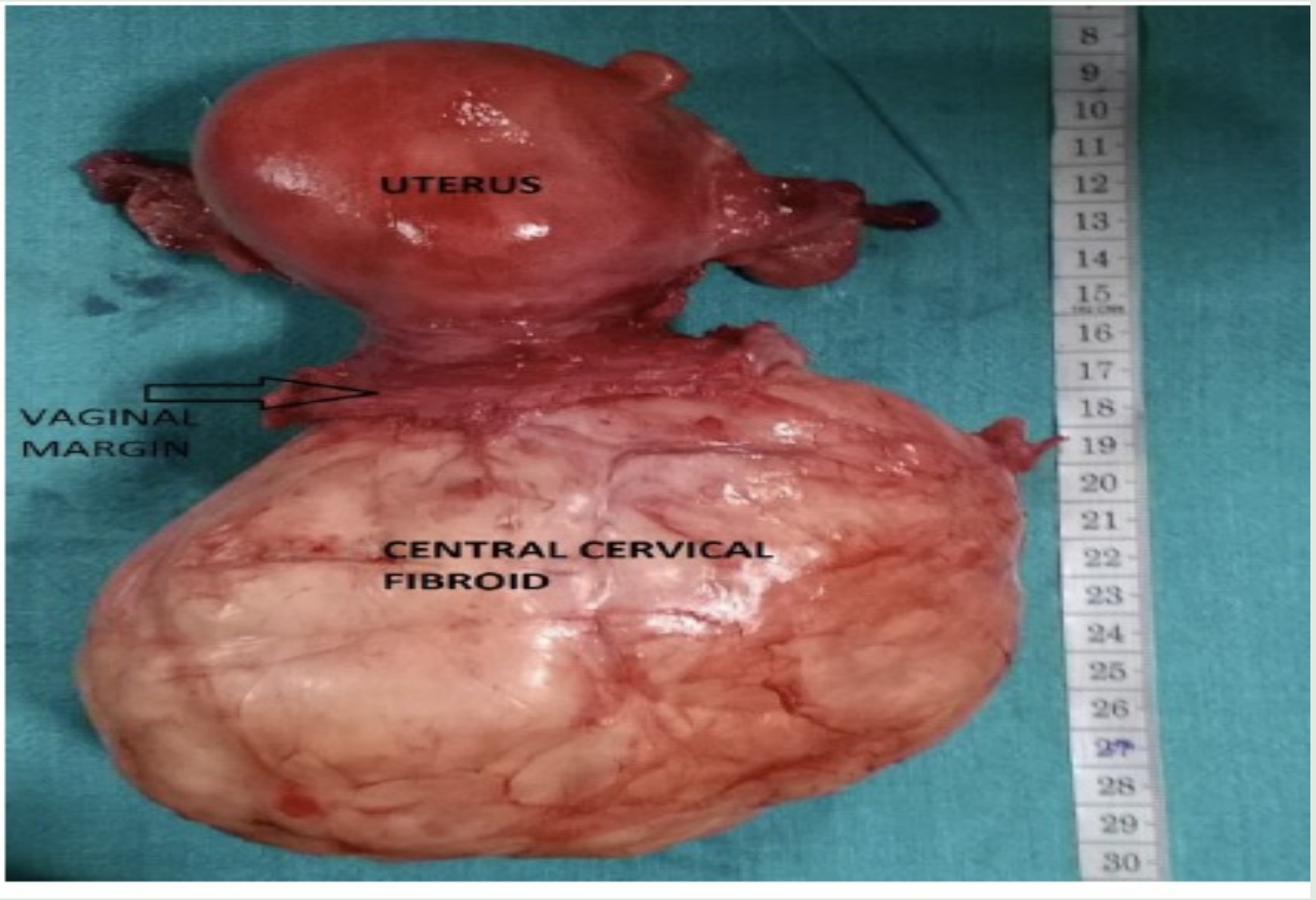
4-Discharge; per vagina due to pelvic congestion

5- Infertility: if fibroid is located in a strategic point e.g. uterine cornu , cervical canal , or uterine cavity.

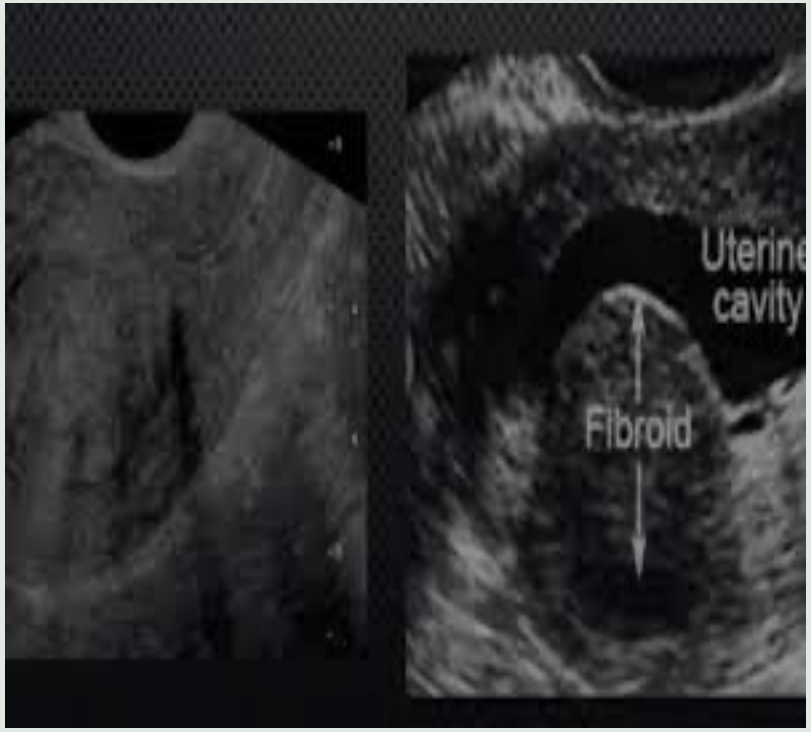
EXAMINATION- (SIGNS)

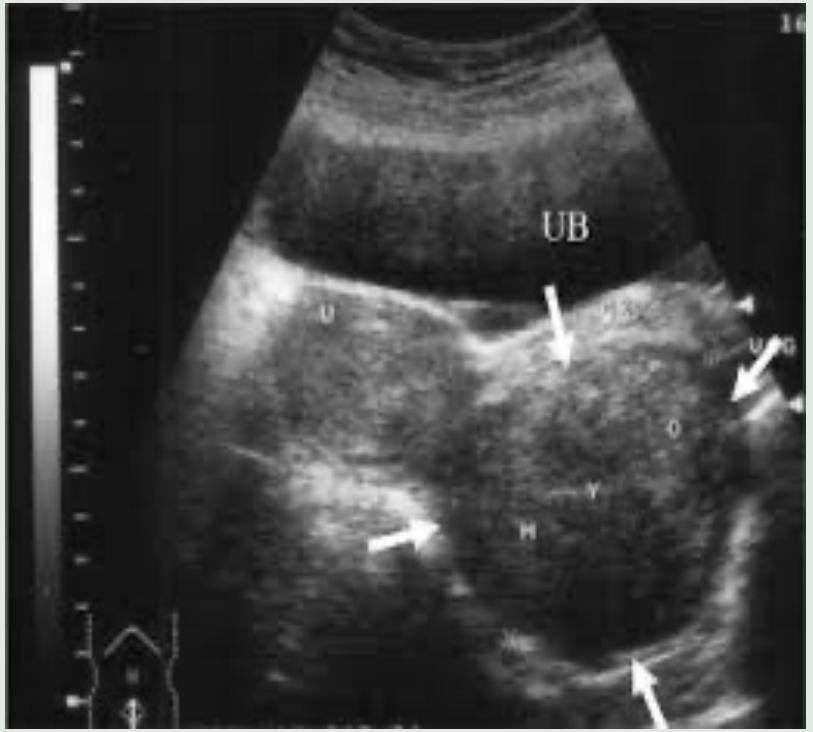
The following findings may be found in women with fibroid:
1- Symmetrically enlarged uterus- submucous myoma
2- Asymmetrically enlarged uterus- multiple, subserous or intramural.
3- Pelviabdominal swelling- large sized fibroids
4- Special sign: ‘ Lantern on bell’ sign in cases of large central cervical fibroid
5-Atypical presentations- mass in cul-de sac, or adnexal mass – in cases of pedanculated fibroid
6- Tenderness over the fibroid

Typical ‘ Lantern on st Paul’s cathedral bell- sign



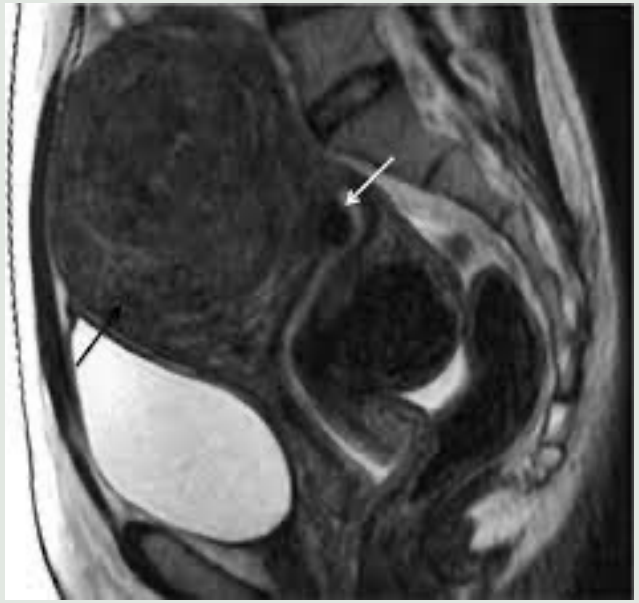
Imaging- ultrasound

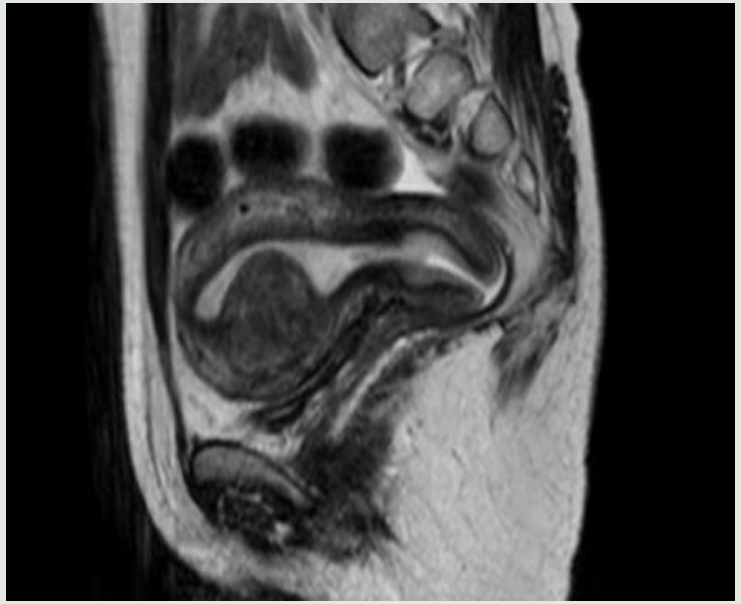


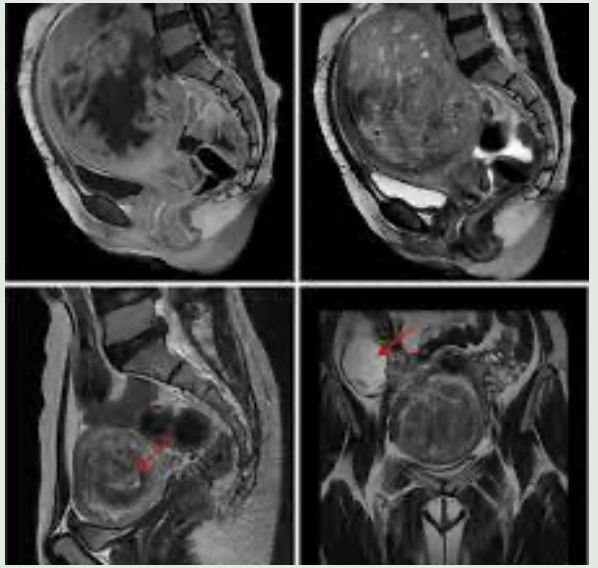


HYPERECOGENIC CAPSULE, WELL-DEMARKATED BOUNDARIES

FIBROID -MRI

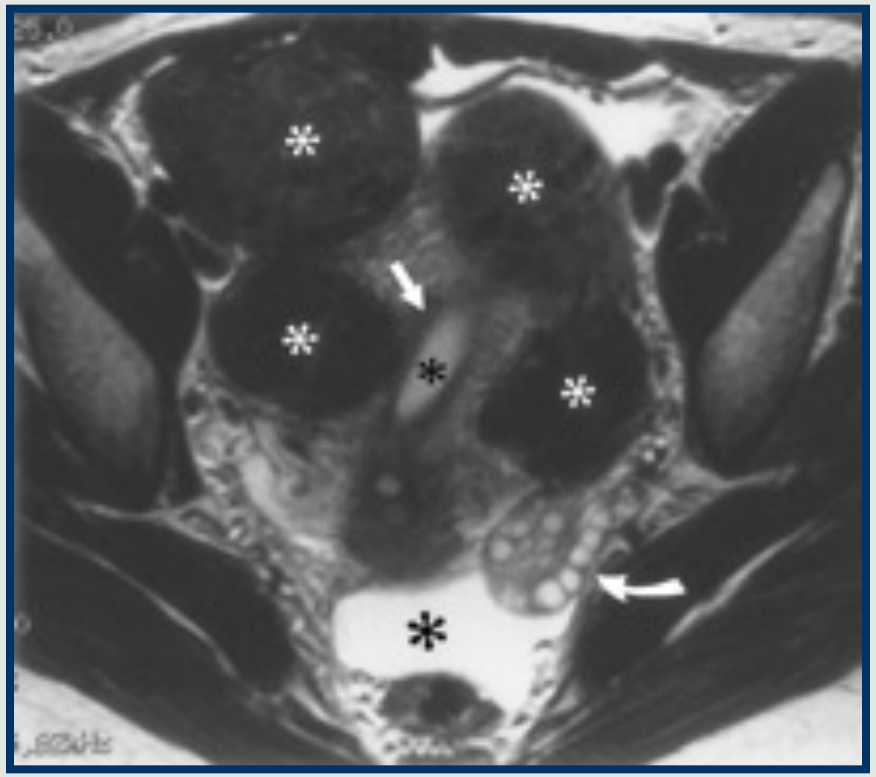


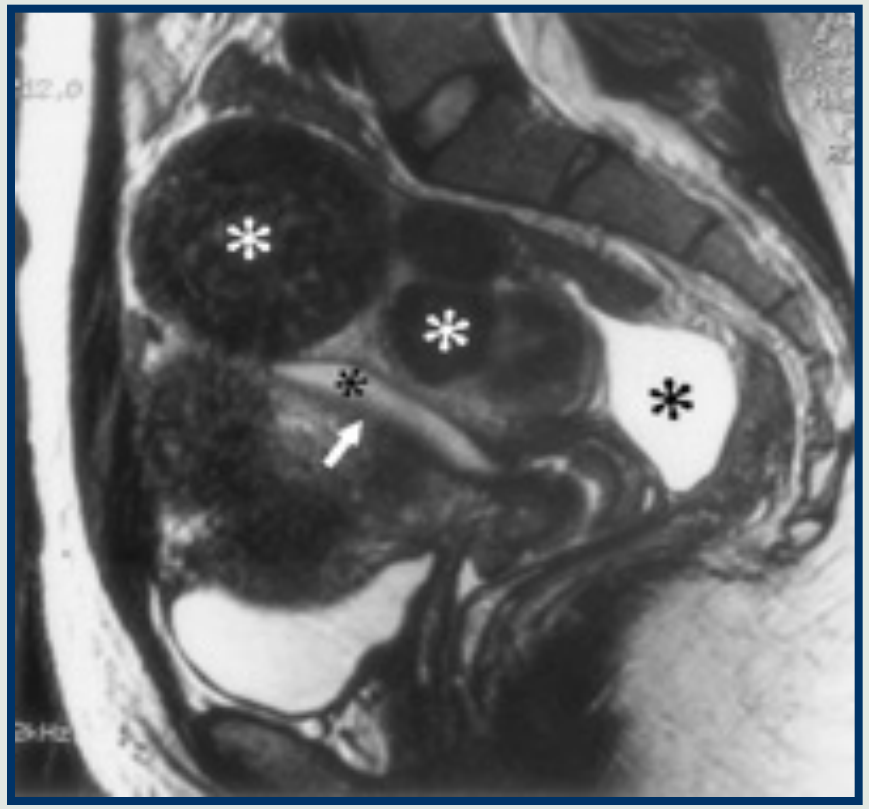




HYPERDENSE CAPSULE, NORMAL JUNCTIONAL ZONE

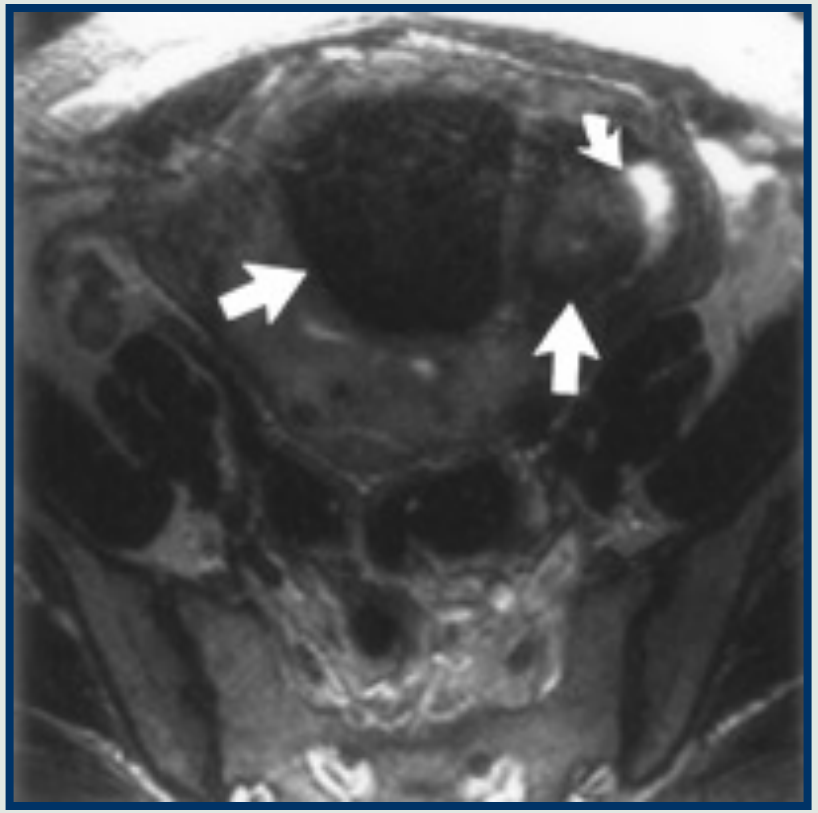
FIBROID -MRI

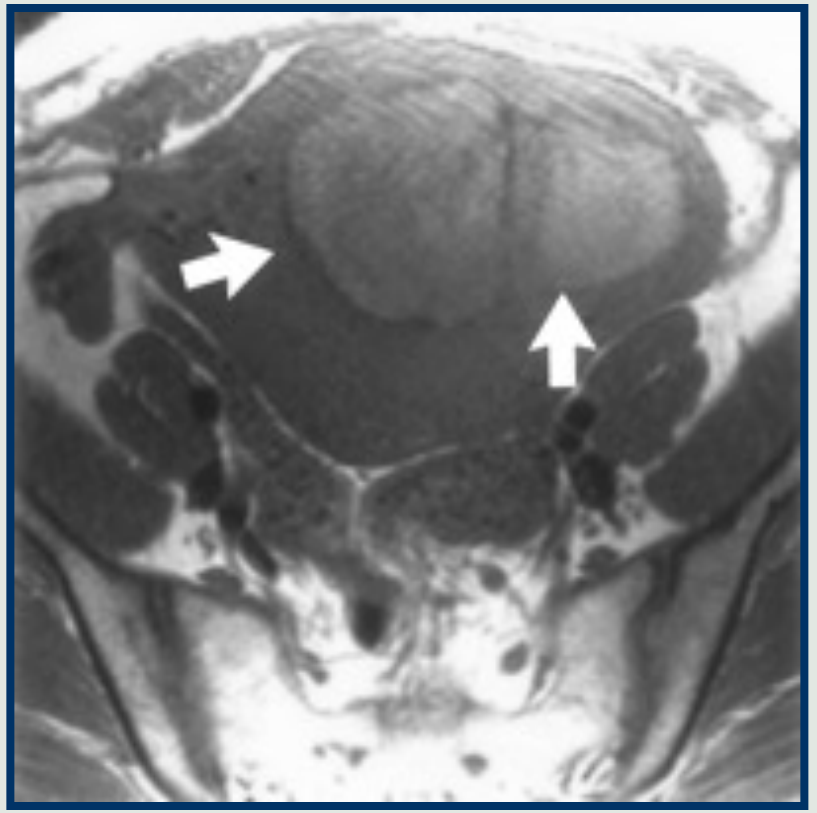




HYPERDENSE CAPSULE, NORMAL JUNCTIONAL ZONE

FIBROID -MRI





HYPERDENSE CAPSULE, NORMAL JUNCTIONAL ZONE

DIFFERENTIAL DIAGNOSIS

1- ADEMOMYOSIS

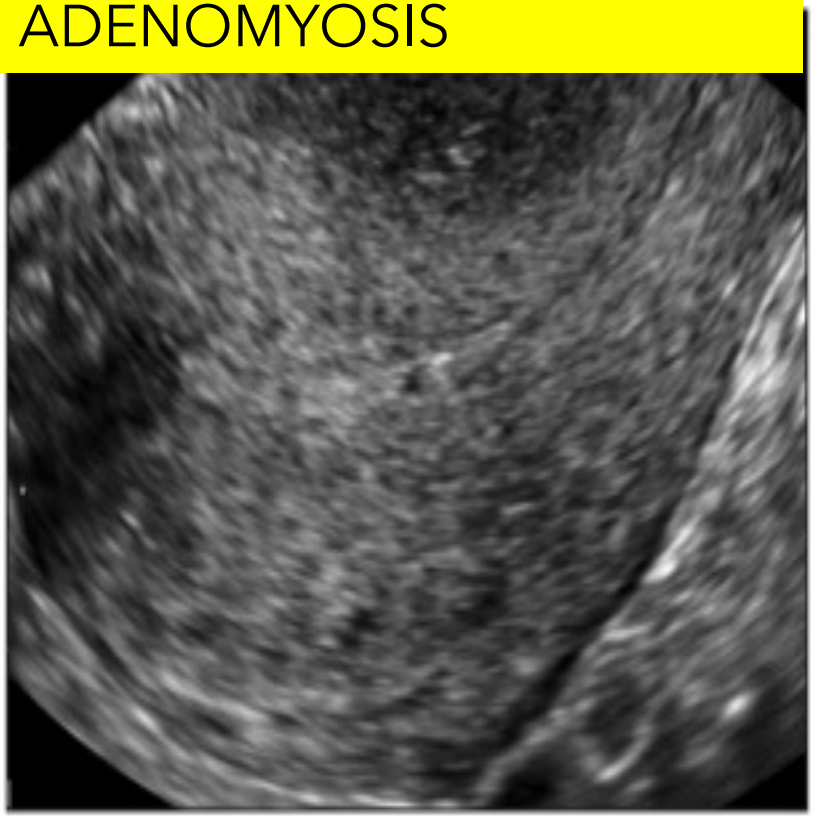
- presence of ectopic endometrial glands and stroma within the myometrium, which are associated with reactive hypertrophy of the surrounding myometrial smooth muscle

- most commonly a diffuse abnormality but may also occur as a focal mass, which is known as an adenomyoma

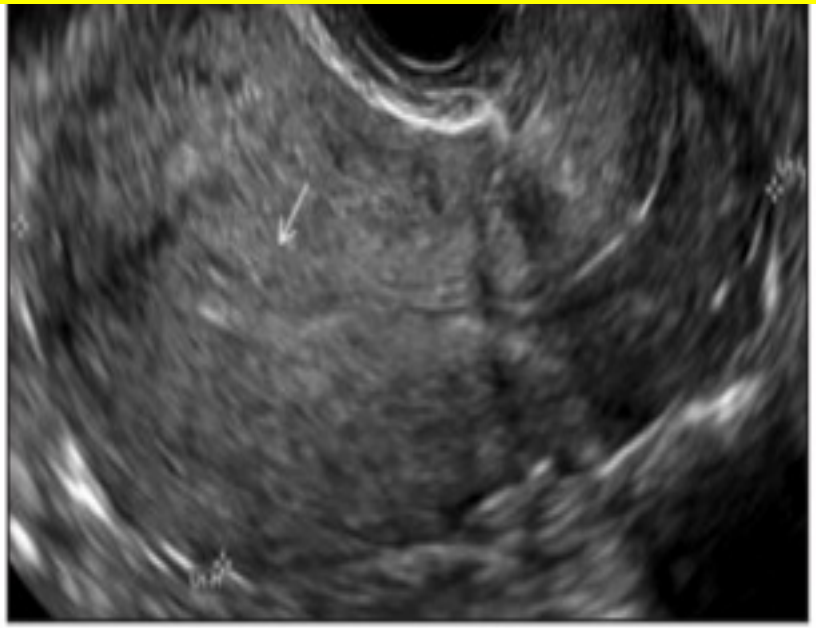
- diffuse form of adenomyosis appears as a thickened junctional zone (inner myometrium) on T2-weighted images (>12mm)

ADENEOMYOSIS -TVS

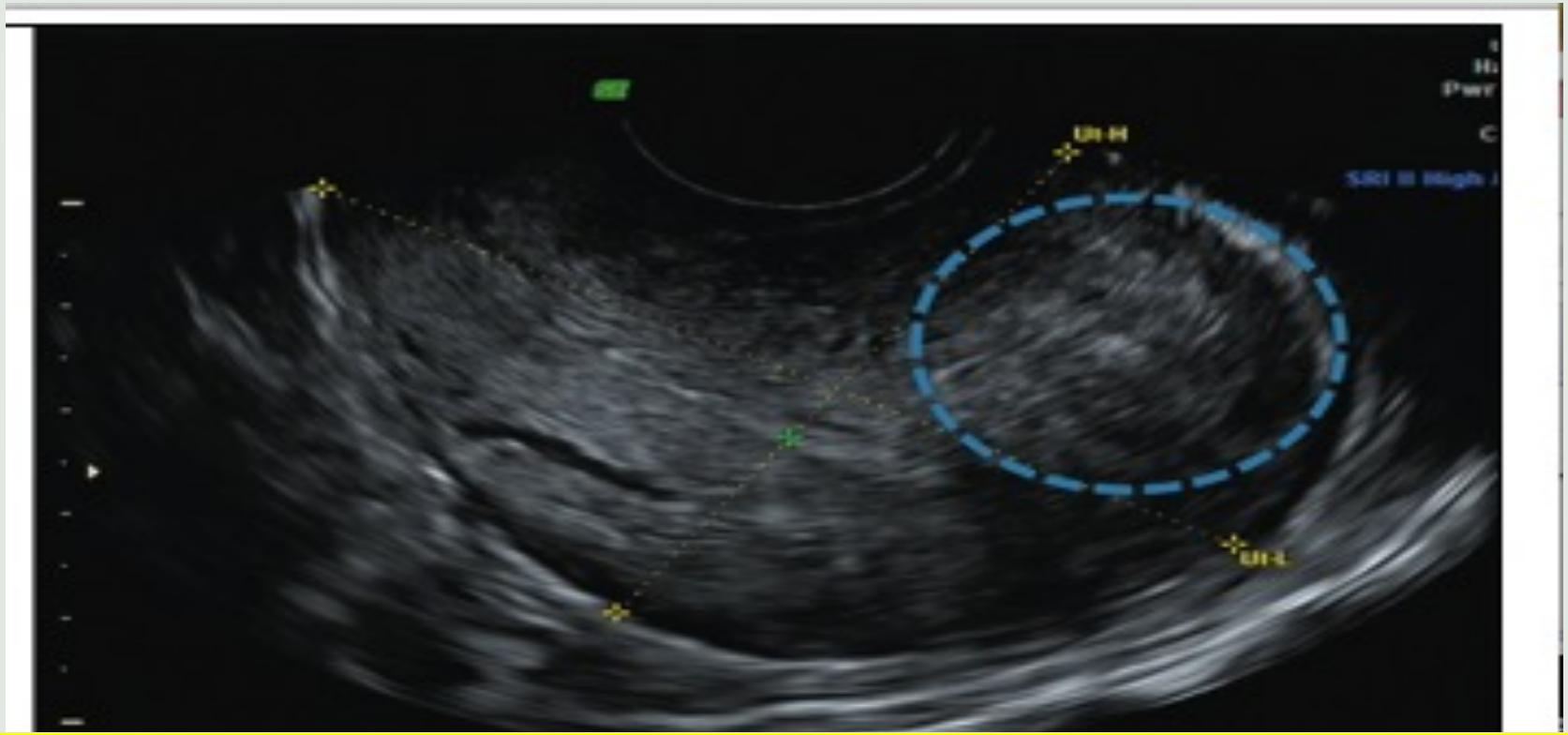
GENERALIZED ADENOMYOSIS



Globular uterine enlargement
With an obscure endometrial - myometrial border (arrow)

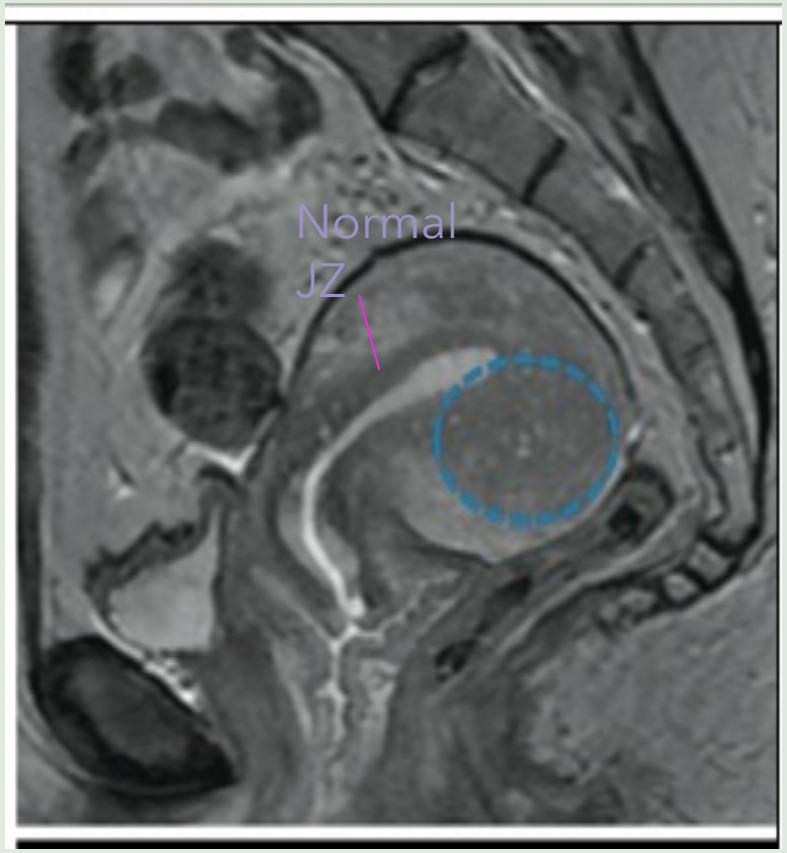


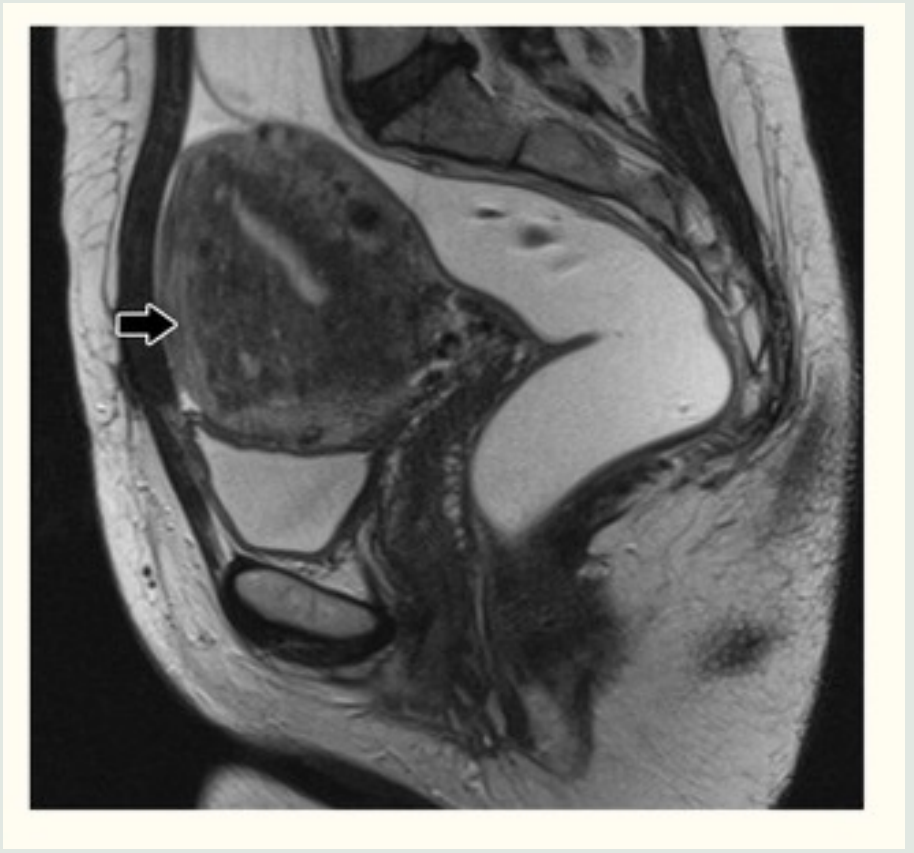
ADENOMYOSIS -TVS



Sonographic image of a uterus with severe postetrior wall adenomyosis . Dotted blue lines denote focal area of adenomyoma with classic ultrasound features of adenomyosis; myometrial cysts & hyperechoic areas

ADENOMYOSIS -MRI





No hyperdense capsule, wide junctional zone >12mm

DIFFERENTIAL DIAGNOSIS

2- Solid Adnexal Mass (versus pedunculated type 7 fibroid)

1) ***Brenner's tumor [epithelial]***
2) ***Ovarian fibroma. [sex-cord stromal]***
3) ***Ovarian fibro-thecoma. ,,,***
4) ***ovarian thecoma ,,,,***
5) ***Grnulosa cell tumor ,,,***
6) ***Immature solid teratoma [germ cell tumors)***
7) ***Dysgerminoma ,,***
8) ***Krukenberg tumor [metastatic ovarian neoplasm]***
9) ***Pregnancy ovarian lutoma [non-neoplasm]***
10) ***Non-functioning rudimentary uterine horn***

TREATMENT OF LEIMYOMA

- No symptoms, no treatment
- Conservative (symptomatic) treatment
- Transient (temporary treatment) using GnRHa (gonadotropin releasing hormone analougues)
- Myolysis
- Uterine artery embolization
- HIFU (High intensity focused ultrasound
- Surgical management (next slide)

Surgical management of fibroid

A- Conservative: [Myomectomy]; when the uterus to be preserved . The myoma can be removed via: 1- vaginal polypectomy. 2- hysteroscopic myomectomy

3- laparoscopic myomectomy 4- Conventional myomectomy via laparomy

B. Hysterectomy: when there is no indication to preserve the uterus. Hysterectomy can be done via: 1- Vaginal hysterectomy, 2- Laparoscopic hysterectomy, 3- Robotic hysterectomy, or 4- Conventional hysterectomy via laparotomy

Surgical management of fibroid

- **Choice of the treatment modality depend on :**

PATIENT'S	TUMOR
1. AGE	1. SIZE
2. PARITY	2. NUMBER
3. SYMPTOMS	3. SITE
4.DESIRE & WISHING (COUNSELING)	4. COMPLICATION
5. THE GYNECOLOGIST'S EXPERIENCE AND SKILLS	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谢谢
dakujem vám
ありがとう
ngiyabonga
dziękuję
merci
baie dankie
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molte grazie
suksema
danke
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