



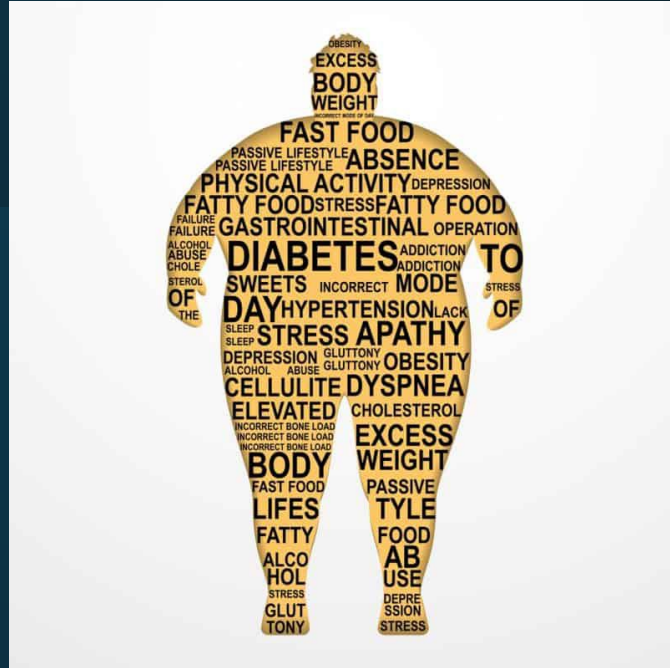
Fibroids

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- Background
- Common presentations and clinical issues associated
- Diagnostics
- Complications that can arise
- Therapeutic Options

Risk Factors

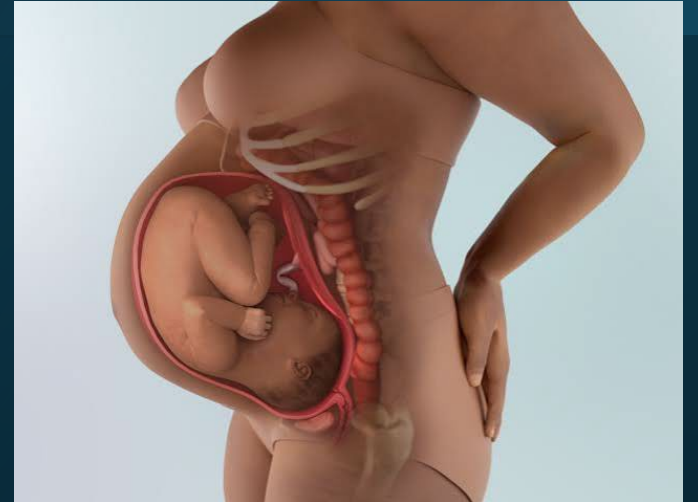




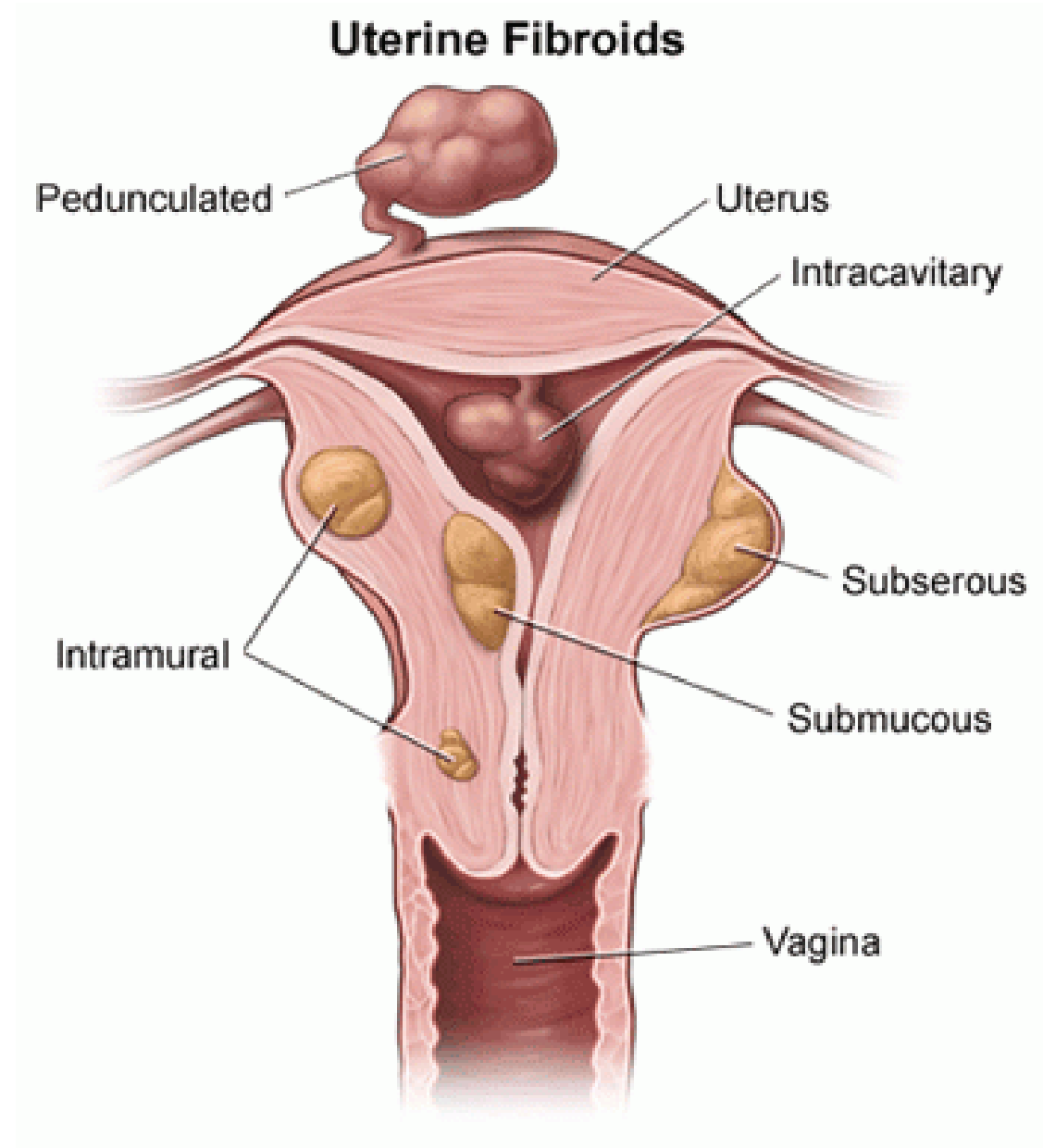
Background

- Most common tumor of the reproductive tract
- Benign smooth muscle growth
- Vary greatly in presentation

Protective factors



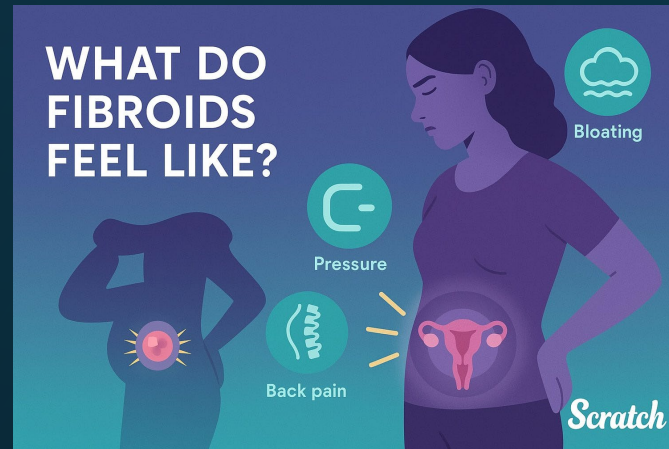
Types of Fibroids



Clinical Presentation



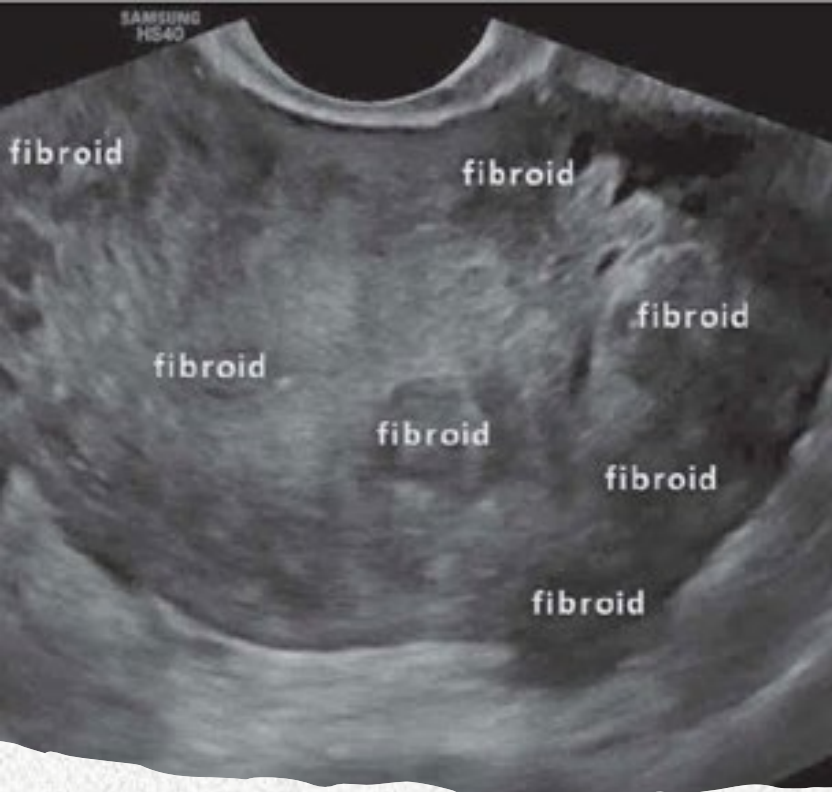
Heavy Menstrual Bleeding



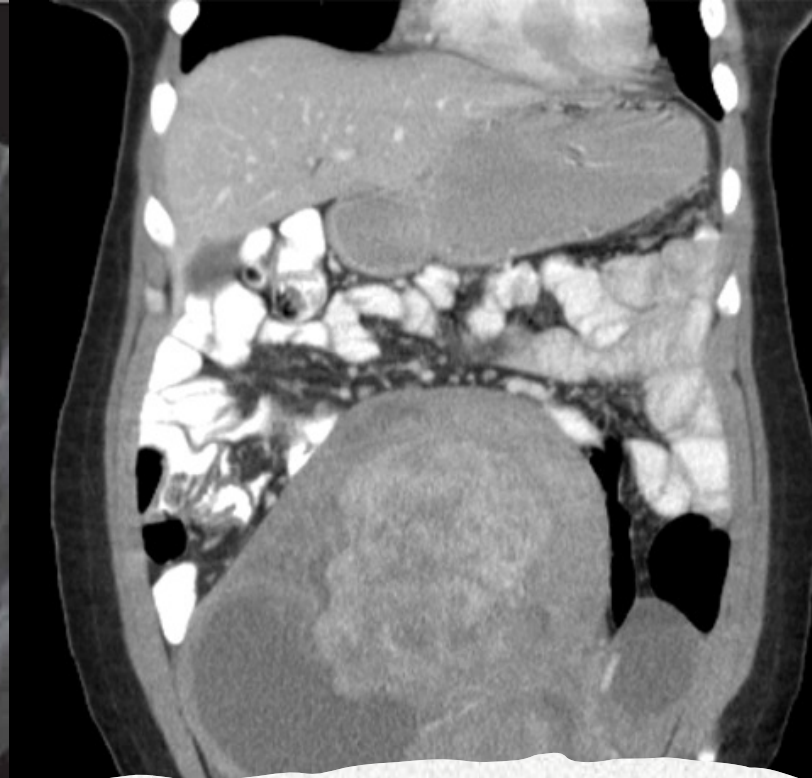
Bulk Symptoms



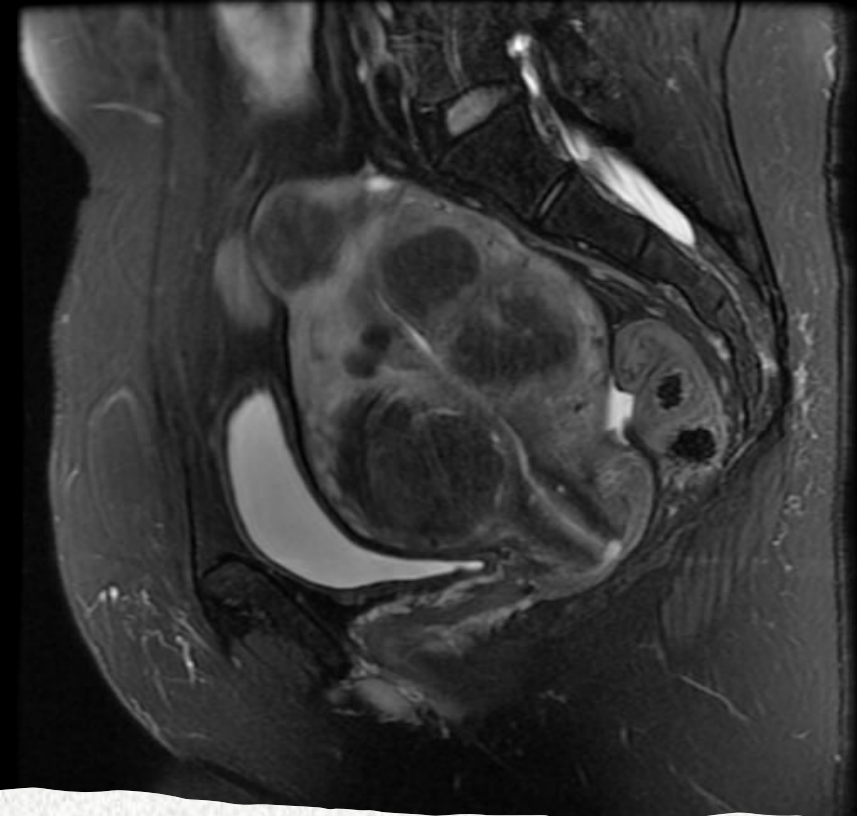
Fertility Issues



Ultrasound

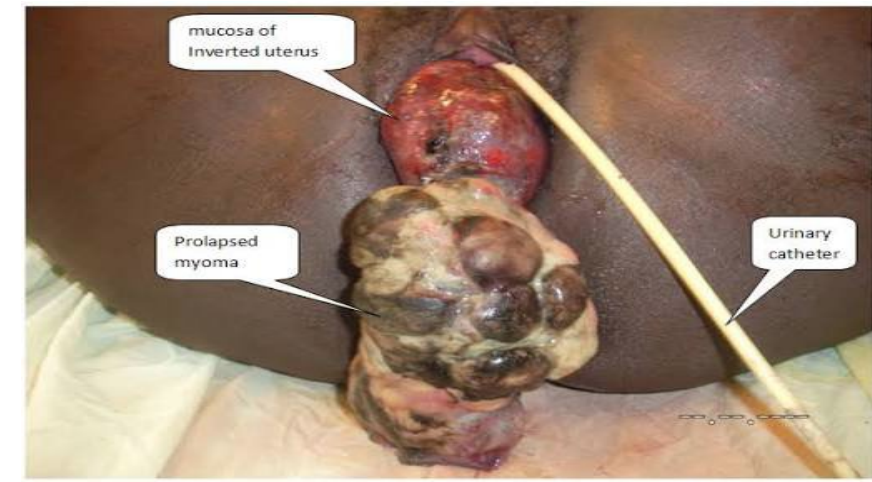
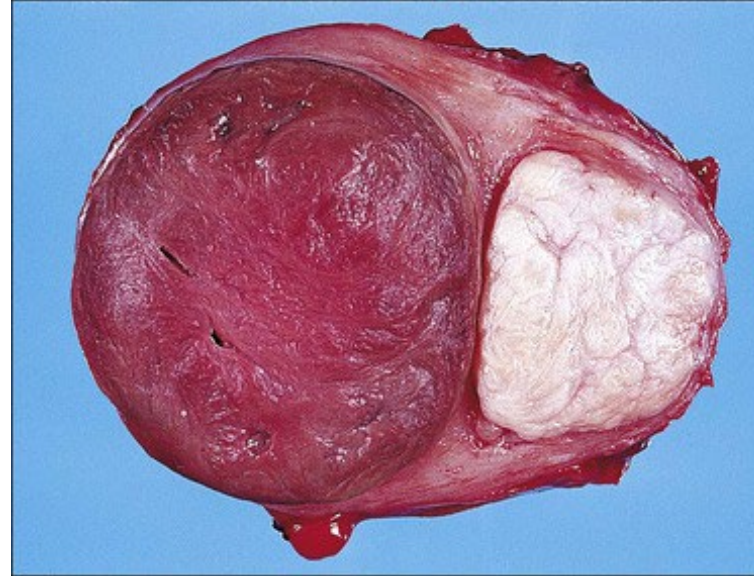
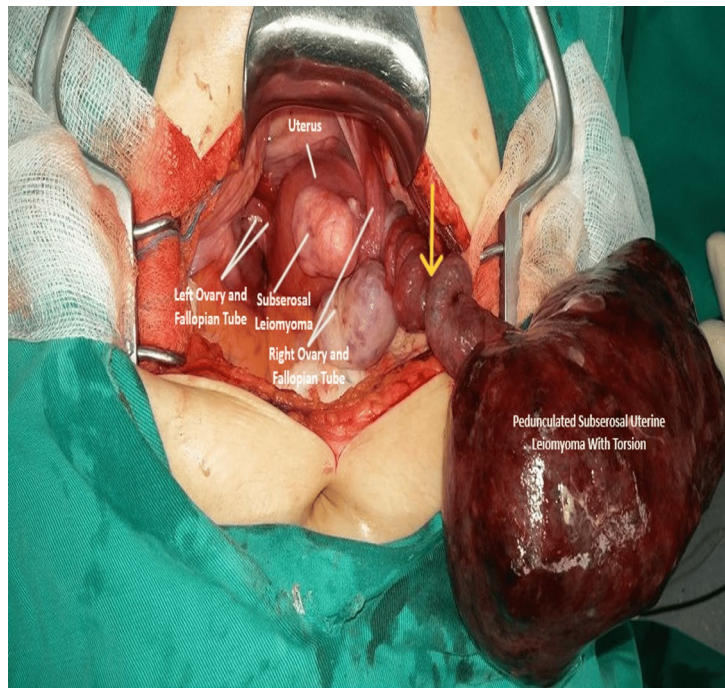


CT



MRI

Imaging



Fibroids During Pregnancy — What Are the Risks?

Miscarriage



Higher likelihood of cesarean delivery



Fetal growth restriction



Placenta previa or placental abruption



Table 3. Comparison of Recommended Therapies for Uterine Fibroids

Treatment	Description	Advantages	Disadvantages	Fertility preserved?
Medical therapies				
Gonadotropin-releasing hormone agonists ³²	Preoperative treatment to decrease size of tumors before surgery or in women approaching menopause	Decrease blood loss, operative time, and recovery time	Long-term treatment associated with higher cost, menopausal symptoms, and bone loss; increased recurrence risk with myomectomy	Depends on subsequent procedure
Levonorgestrel-releasing intrauterine system (Mirena) ³³	Treats abnormal uterine bleeding, likely by stabilization of endometrium	Most effective medical treatment for reducing blood loss; decreases fibroid volume	Irregular uterine bleeding, increased risk of device expulsion	Yes, if discontinued after resolution of symptoms
Nonsteroidal anti-inflammatory drugs ³⁴	Anti-inflammatories and prostaglandin inhibitors	Reduce pain and blood loss from fibroids	Do not decrease fibroid volume; gastrointestinal adverse effects	Yes
Oral contraceptives ³³	Treat abnormal uterine bleeding, likely by stabilization of endometrium	Reduce blood loss from fibroids; ease of conversion to alternate therapy if not successful	Do not decrease fibroid volume	Yes, if discontinued after resolution of symptoms
Selective progesterone receptor modulators ^{35,36}	Preoperative treatment to decrease size of tumors before surgery or in women approaching menopause	Decrease blood loss, operative time, and recovery time; not associated with hypoestrogenic adverse effects	Headache and breast tenderness, progesterone receptor modulator–associated endometrial changes; increased recurrence risk with myomectomy	Depends on subsequent procedure
Tranexamic acid (Cyklokapron) ^{37,38}	Antifibrinolytic therapy	Reduces blood loss from fibroids; ease of conversion to alternate therapy	Does not decrease fibroid volume; medical contraindications	Yes
Surgical therapies				
Hysterectomy ³⁹	Surgical removal of the uterus (transabdominally, transvaginally, or laparoscopically)	Definitive treatment for women who do not wish to preserve fertility; transvaginal and laparoscopic approach associated with decreased pain, blood loss, and recovery time compared with transabdominal surgery	Surgical risks higher with transabdominal surgery (e.g., infection, pain, fever, increased blood loss and recovery time); morcellation with laparoscopic approach increases risk of iatrogenic dissemination of tissue	No
Magnetic resonance–guided focused ultrasound surgery ⁴⁰	In situ destruction by high-intensity ultrasound waves	Noninvasive approach; shorter recovery time with modest symptom improvement	Heavy menses, pain from sciatic nerve irritation, higher reintervention rate	Unknown
Myomectomy ⁴¹	Surgical or endoscopic excision of tumors	Resolution of symptoms with preservation of fertility	Recurrence rate of 15% to 30% at five years, depending on size and extent of tumors	Yes
Uterine artery embolization ⁴²	Interventional radiologic procedure to occlude uterine arteries	Minimally invasive; avoids surgery; short hospitalization	Recurrence rate > 17% at 30 months; postembolization syndrome	Unknown

Information from references 32 through 42.

Traditional Medications

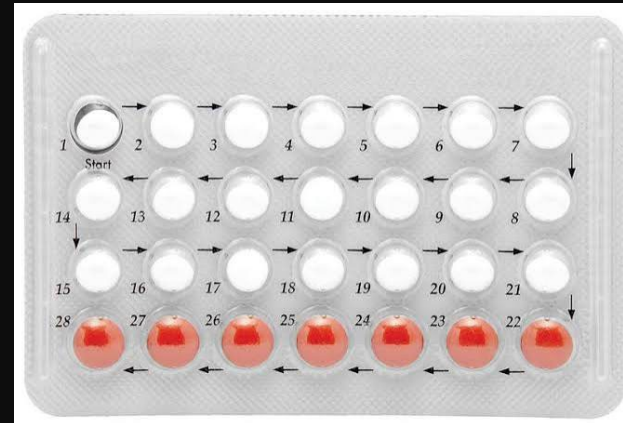
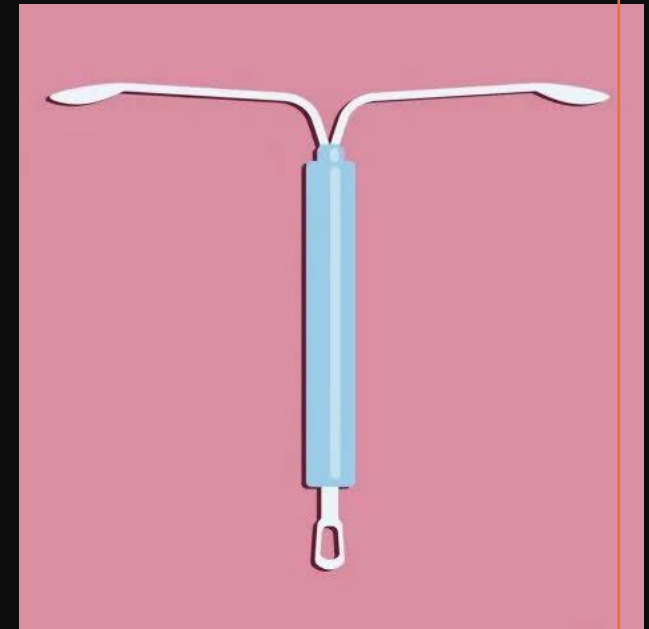
OCP

Lng IUD

TXA (oral)

GnRH

Agonist/Antagonist
(Lupron)





GnRH antagonist ORAL Therapy



Table 1.

Efficacy of relugolix 40 mg coadministered with estradiol/norethisterone acetate 1/0.5 mg in women with fibroid-associated heavy menstrual bleeding in phase 3 clinical trials [9]

Endpoints ^a	LIBERTY 1			LIBERTY 2		
	PL (n = 127)	RCT (n = 128)	DRCT (n = 127)	PL (n = 129)	RCT (n = 125)	DRCT (n = 127)
Menstrual bleeding response ^b (% pts)	19	73***	80	15	71***	73
Key secondary endpoints ^c						
Amenorrhea ^d (% pts)	6	52***	58	3	50***	50
Menstrual blood loss volume (Δ %)	– 23.2	– 84.3***	– 88.2	– 15.1	– 84.3***	– 89.4
BPDS score (Δ)	– 16.1	– 45.0***	– 51.3	– 18.3	– 51.7***	– 48.9
Anaemia improved ^e (% pts) [n]	22 [23]	50 [30]*	56 [32]	5 [37]	61 [31]***	58 [31]
Maximum NRS score ≤ 1 ^d (% pts) [n]	10 [69]	43 [58]***	42 [65]	17 [82]	47 [68]***	41 [58]
Primary uterine fibroid volume (Δ %)	– 0.3	– 12.4	– 22.7	– 7.4	– 17.4	– 30.2
Uterine volume (Δ %)	2.2	– 12.9***	– 17.9	– 1.5	– 13.8**	– 17.7

See main text for randomized treatment details

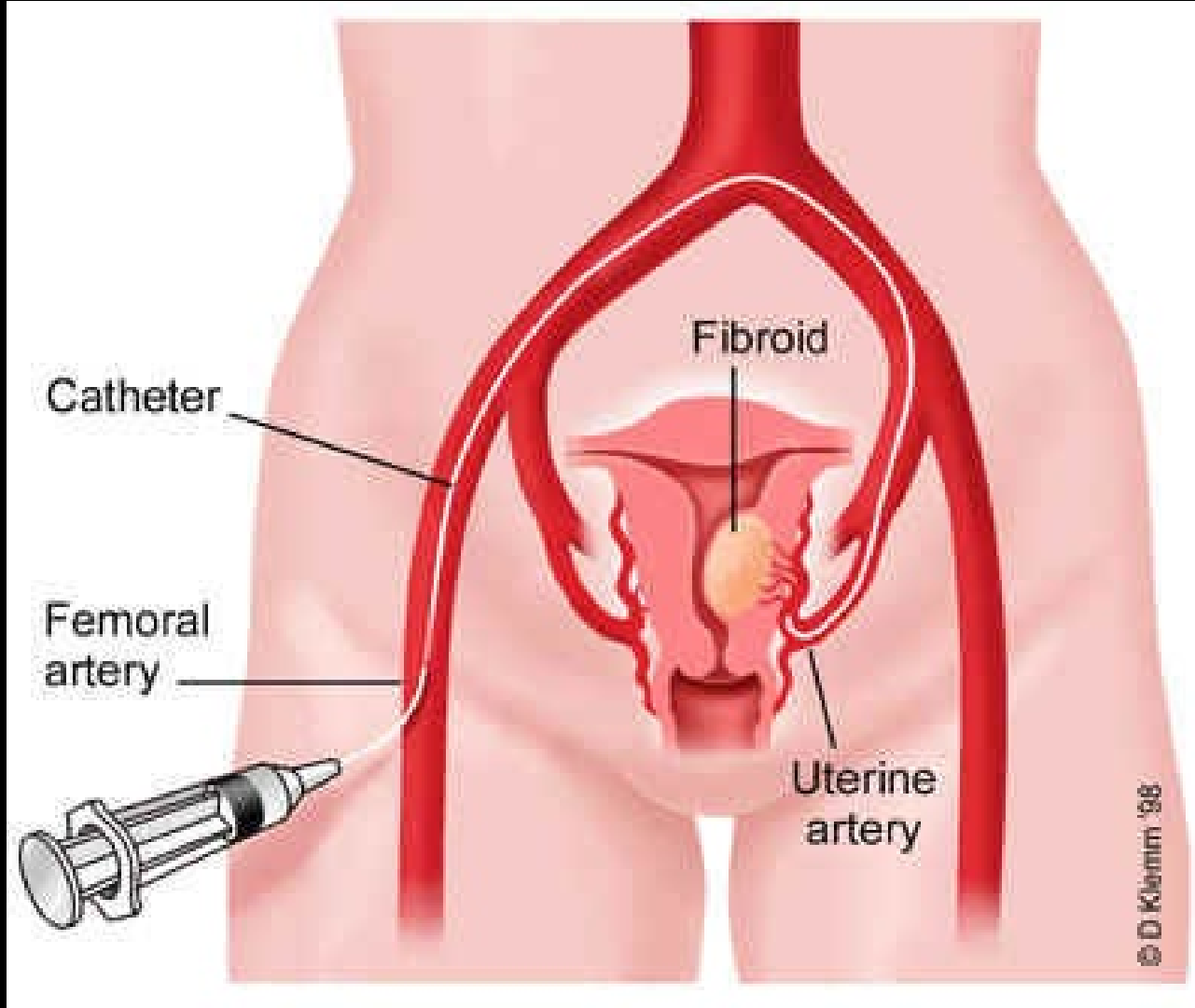
Δ change from baseline at week 24, BPDS Bleeding and Pelvic Discomfort scale, DRCT delayed relugolix combination therapy, NRS numerical rating scale, PL placebo, RCT relugolix combination therapy

* p < 0.05 ** p < 0.01 *** p < 0.001





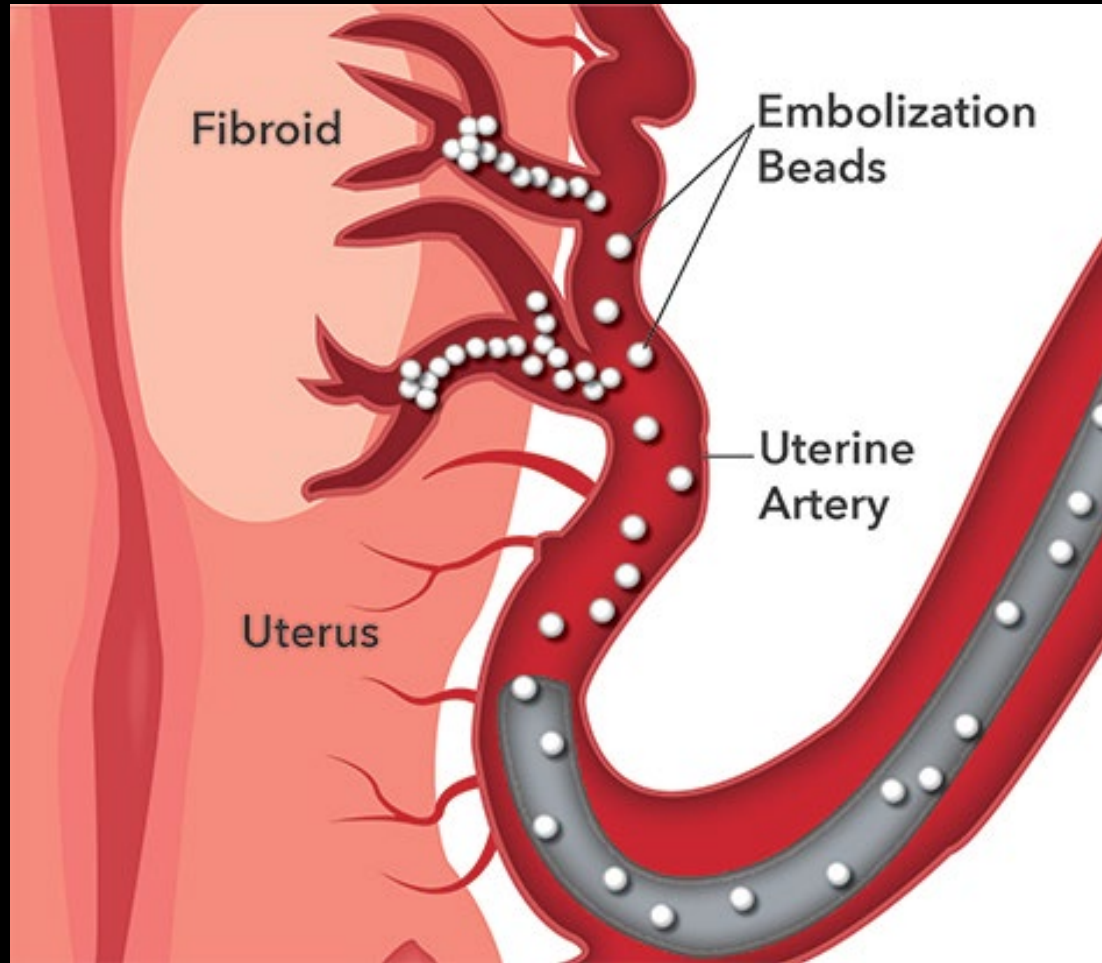
Uterine Artery Embolization



- 1 hour
- Less risk of blood transfusion
- Shorter hospitalization
- Faster recovery
- Good short-term satisfaction



Complications



- Fevers/chills
- Nausea/vomiting
- Pelvic infection
- Postembolization syndrome-pain
- Unplanned hysterectomy
- PE
- Ovarian failure

UAE in Pregnancy

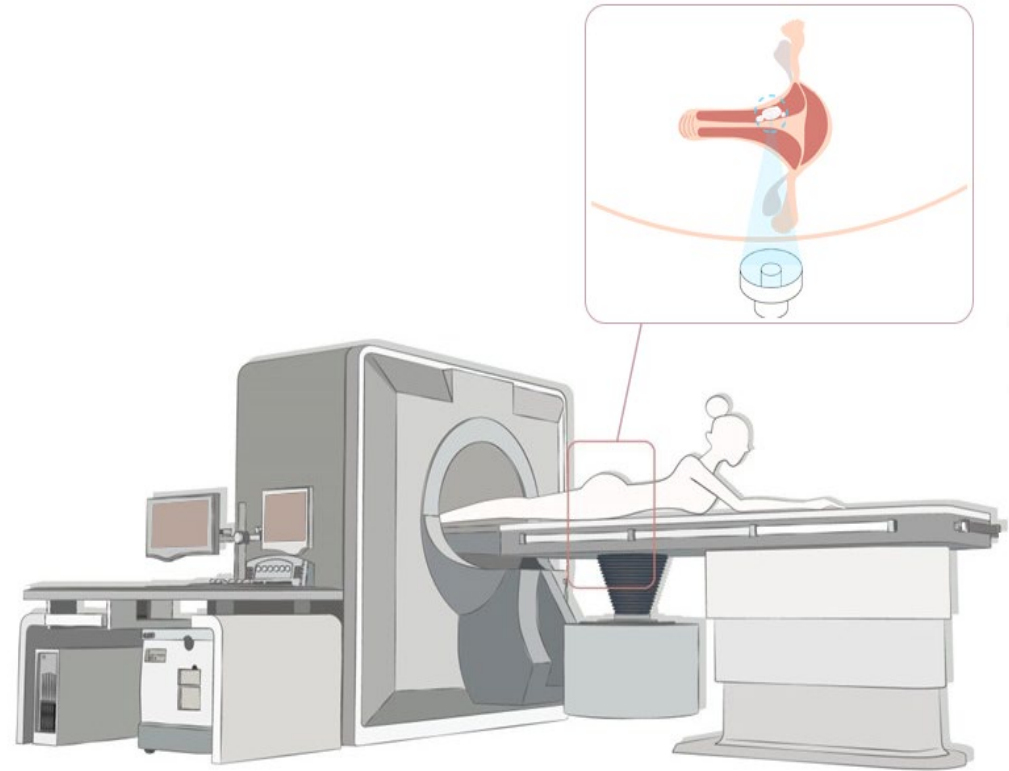
- miscarriage
- cesarean delivery
- postpartum hemorrhage

no significant differences in preterm delivery* and fetal growth restrictions

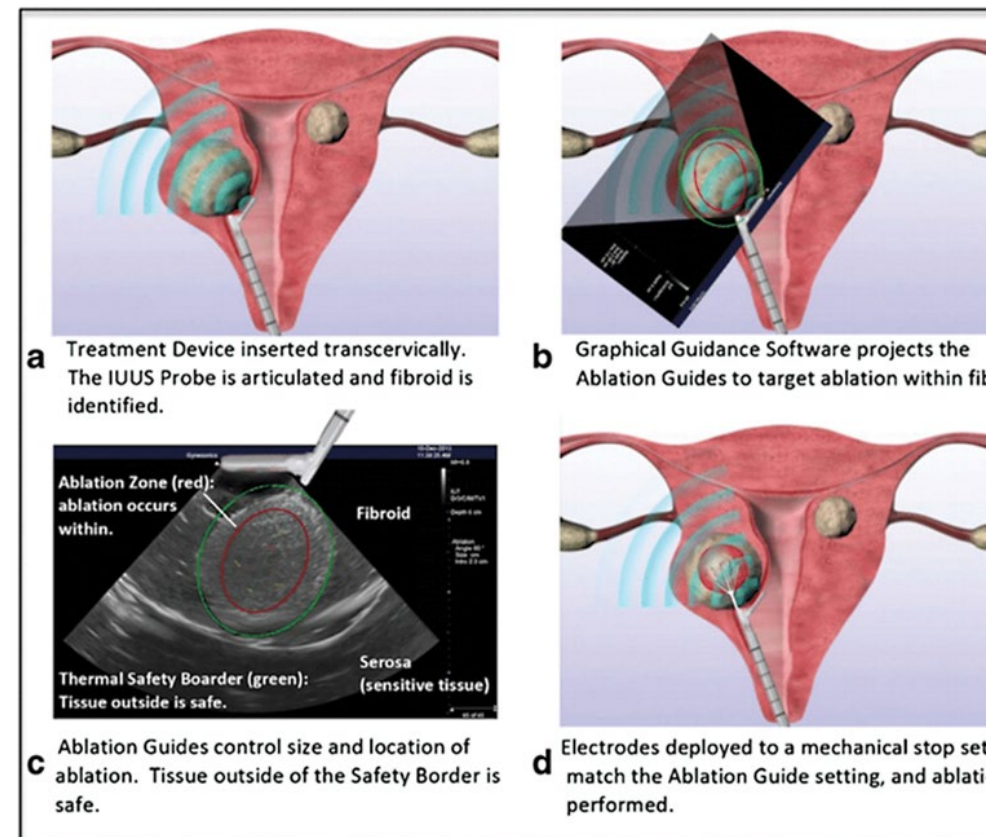
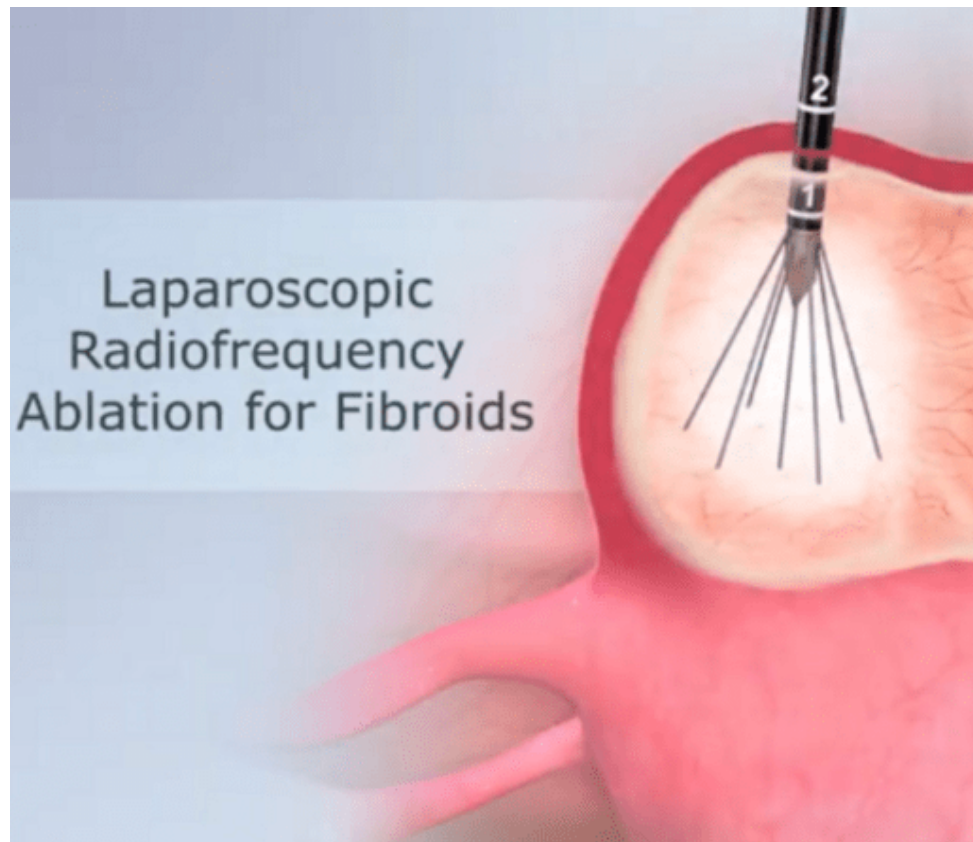


Ultrasound Ablation

- fibroid volume shrinkage ranging from 18% at 3 months to 84% at 36 months
- Can be performed under either magnetic resonance imaging (MRIGHIFU) or ultrasound (USgHIFU) guidance
- 8% reintervention rate
- recurrence rate with HIFU is approximately 15%, which is lower or at least comparable with myomectomy



Trans-cervical and laparoscopic RFA therapies

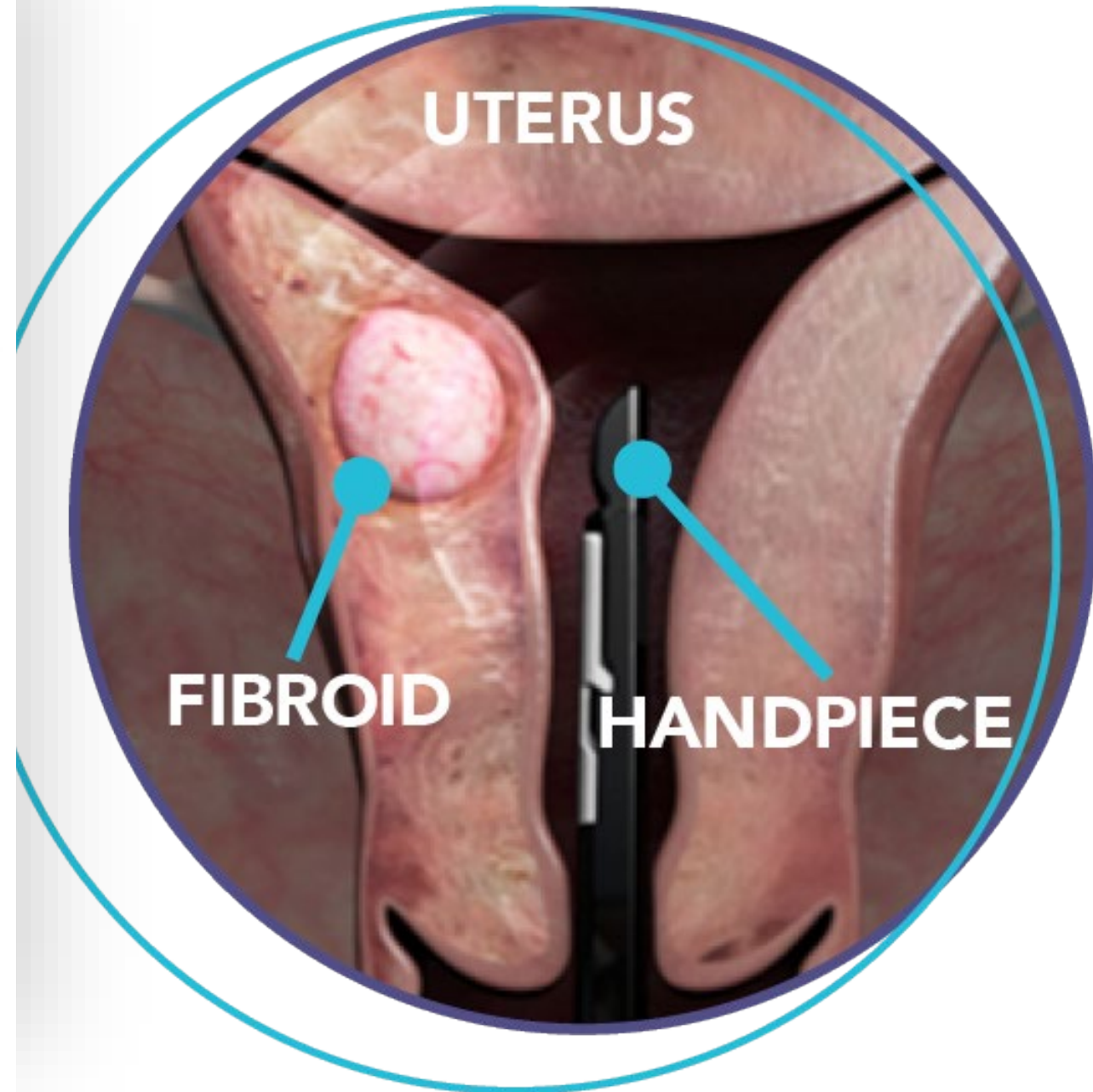




- adverse events are low (1.78%)
- Average length of stay is 10.7 hours with mean return to work after 4.3 days
- HMB reduced at 3 months of treatment by 31.8% and 38.3% at 12 months ($p < 0.001$).
- Within 3 months, the total mean fibroid volume reduced by 39.8% with continued decrease at 12 months to 45.1%



- Average length of stay is 2.5 hours with over 50% of patients resuming normal activities after 1 day.
- Average reduction in total myoma volume was 62.4%
- 50% or greater reduction in a menstrual bleeding was achieved in 65.3% (79/121) of patients at 12 months posttreatment.
- 86.3% of patients experienced improved menstrual bleeding as soon as 3 months





TRUST Trial (Trial of Uterine-Sparing Techniques)

- Both procedures led to significant improvement in fibroid-related symptoms such as heavy bleeding, increased abdominal girth, and pelvic pain.
- Laparoscopic myomectomy resulted in a greater reduction in symptom severity (12.1 vs. 23.4%, $p < 0.05$) and improvement in quality-of-life scores (95.6 vs. 78.7%, $p < 0.05$).
- At 12 months, less patients who underwent laparoscopic myomectomy reported heavy menstrual bleeding.



Limited data in pregnancy



Thank You