Therapeutic Approaches to Uterine Fibroids

FOR PROVIDERS

PHARMACOLOGIC MANAGEMENT[1,2]

- Minimal efficacy in long-term symptom control
- Gonadotropin-releasing hormone (GnRH) agonists: Temporary volume reduction, can cause (mineral loss, hypoestrogenism)
- Oral contraceptives / Progestins: Symptomatic control, no effect on fibroid volume
- Selective progesterone receptor modulators (SPRMs): Limited availability due to hepatic safety concerns

SURGICAL INTERVENTIONS

HYSTERECTOMY (TOTAL OR SUPRACERVICAL)

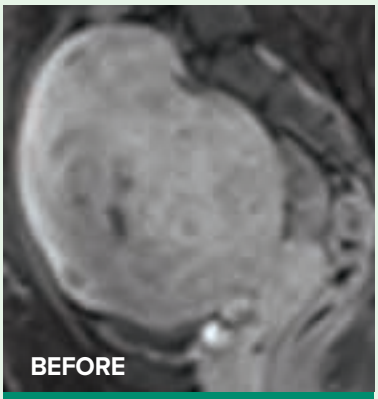
- About 600,000 hysterectomies are performed in the U.S. each year[3]
- Definitive treatment but associated with:
  - — Surgical morbidity: infection, hemorrhage, thromboembolism
  - — Long recovery (4–6 weeks)
  - — Loss of reproductive potential

MYOMECTOMY

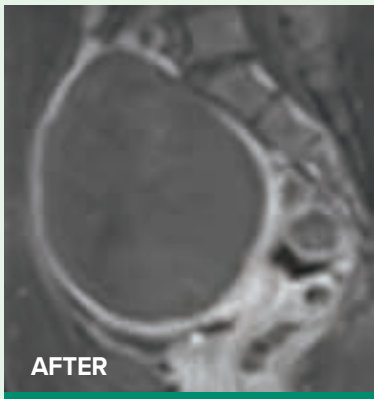
- Limited to accessible fibroids, does not treat smaller lesions
- High recurrence rate (~50% at 5 years)[4]
- Requires general anesthesia

UTERINE FIBROID EMBOLIZATION (UFE) – THE OPTIMAL ALTERNATIVE

- Minimally invasive, image-guided transcatheter therapy
- Selective occlusion of arteries supplying fibroids ➔ ischemic infarction
- Preserves the uterus and reproductive function
- Treats all fibroids in one session, including adenomyosis



Pre UFE showing MRI pre with contrast.



3 month post UFE shows no Arterial enhancement.

Why UFE Over Surgery?

Feature	UFE	Hysterectomy	Myomectomy
Minimally Invasive	✓ Yes	✗ No	✗ No
Uterine Preservation	✓ Yes	✗ No	✓ Yes
No Hospitalization	✓ Outpatient	✗ 1–3 days	✗ 1–3 days
Short Recovery Time	✓ ~1 week	✗ 4–6 weeks	✗ 2–3 weeks
Permanently Removes Fibroids	✓ Yes	✓ Yes	✓ Yes (small residual fibroids)
Avoids Early Menopause	✓ Yes	✗ No	✓ Yes
No General Anesthesia Required	✓ Yes	✗ No	✗ No

1. Sadick, M., Hofmann, L., Weiß, C. et al. Long-term evaluation of uterine fibroid embolisation using MRI perfusion parameters and patient questionnaires: preliminary results. BMC Med Imaging 22, 214 (2022). https://doi.org/10.1186/s12880-022-00926-y. Creative Commons License: http://creativecommons.org/licenses/by/4.0/. No changes made.
2. Stewart EA. Uterine fibroids. Lancet. 2001;357(9252):293-298.
3. Munro MG, Critchley HO, Fraser IS. The FIGO classification of causes of abnormal uterine bleeding. Int J Gynaecol Obstet. 2011;113(1):3-13.
4. Pisco JM, Duarte M, Bilhim T, et al. Uterine fibroid embolization in patients with large fibroids: long-term clinical outcome prediction. Radiology. 2019;291(1):158-164.
5. McLucas B. Pregnancy following uterine fibroid embolization. Fertil Steril. 2001;75(6):1246-1248.
6. Katsumori T, Nakajima K, Tokuhiro K. Long-term outcomes of uterine artery embolization for symptomatic fibroids. J Vasc Interv Radiol. 2006;17(4):763-767.
7. Deipolyi AR, Annie F, Bush SH II, Spies J. Hysterectomy and myomectomy versus uterine artery embolization: clinical outcomes and quality-of-life analysis. J Vasc Interv Radiol.

WHAT IS UFE?

- Transarterial catheterization of the uterine arteries
- Embolization agents are delivered via microcatheter
- Selective ischemia → infarction of fibroids while preserving normal myometrium
- Maximal fibroid volume reduction occurs over 3–9 months

IS UFE PAINFUL?

- No incisions, no myometrial dissection → minimal pain
- No general anesthesia required
- Patients typically experience severe cramping for ~3 days
- Post-procedural discomfort & cramping managed with:
  - — Superior hypogastric nerve block (24-hour pain control)
  - — NSAIDs and opioid multimodal analgesia

BENEFITS OF UFE

- Minimally invasive, no surgical incisions
- Reduced perioperative morbidity compared to surgery
- Faster recovery (1 week vs. 4–6 weeks for surgery)
- No risk of pelvic adhesions or iatrogenic infertility
- Simultaneously treats adenomyosis and fibroids
- Effective for all fibroid sizes, including subclinical lesions

POST-UFE RECOVERY & OUTCOMES

- Save the Uterus
- Compared to Hysterectomy, UFE patient have[7]
  - — 3x less need for blood transfusion
  - — 4x less pelvic floor dysfunction
  - — 3x less bowel obstruction
- Outpatient procedure → discharge same day
- Resumption of daily activities within 3–7 days
- Menorrhagia and dysmenorrhea resolve within 1–2 cycles
- Bulk-related symptom relief occurs progressively over months

DOES UFE AFFECT FERTILITY?

- Uterine and endometrial integrity preserved
- Pregnancy rates post-UFE comparable to myomectomy[5]
- Increases embryo implantation potential by reducing fibroid mass effect
- Unblocks fallopian tubes in cases of tubal compression
- Patients advised to delay conception for 3–6 months post-procedure

DOES UFE INDUCE MENOPAUSE?

- No. Ovarian reserve remains intact
- Uterine arteries embolized, but ovarian perfusion via ovarian arteries remains
- Menopause risk may only increase in perimenopausal patients[6]

PRE-PROCEDURAL WORKUP

1. Pelvic MRI (with and without contrast for fibroid mapping)
2. Uterine and ovarian vascular supply assessment
3. Exclusion of malignancy (leiomyosarcoma)

INSURANCE COVERAGE

- ✓ Widely covered by commercial and government insurers
- ✓ Rarely requires pre-authorization

For further information on UFE, please contact one of our interventional radiologists at (952) 222-7594.

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