Therapeutic Approaches to Uterine Fibroids

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)

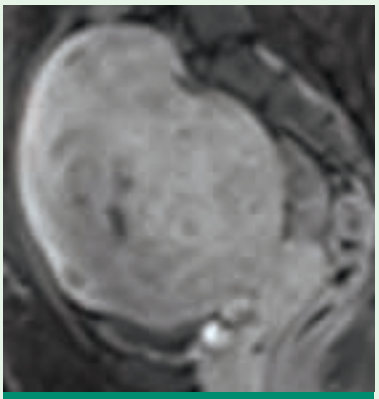
- About 600,000 hysterectomies are performed in the U.S. each year[3]
- Definitive treatment but associated with:
  - — Surgical morbidity: infection, hemorrhage, thromboembolism
  - — Long recovery (4–6 weeks)
  - — Loss of reproductive potential

MYOMECTOMY

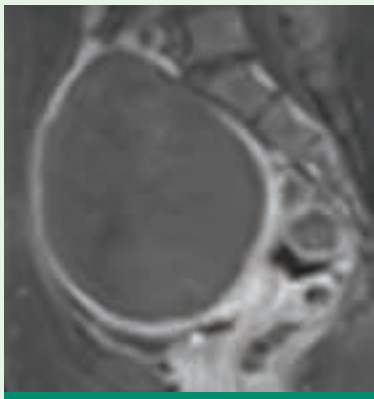
- Limited to accessible fibroids, does not treat smaller lesions
- High recurrence rate (~50% at 5 years)[4]
- Requires general anesthesia

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



Sagittal view of pelvic MRI showing large uterine fibroid demonstrating heterogenous enhancement.



Post ufe there is complete non enhanced of the fibroid will shrink over the next months.

Why UFE Over Surgical Alternatives?

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) 295-4396.

NORTH STAR FIBROID CLINIC

northstarfibroidclinic.com
P: (952) 295-4396
F: (833) 450-5825
8401 Golden Valley Rd
Suite 340
Golden Valley, MN 55427