# Uterine Fibroid Embolisation (UFE) - Technical aspects

**Descriptor:**

Assessing the departmental provision of Uterine Fibroid Embolisation

**Background:**

Uterine fibroid are benign tumours of the uterus. Whilst most are asymptomatic, they may cause menorrhagia, abdominal discomfort, urinary symptoms and occasionally infertility. For many years the mainstay of treatment was surgical myomectomy, however since 1995 Interventional Radiologists have been treating symptomatic fibroids by embolising the arterial tumour supply, most commonly using PVA particles. As a minimally invasive procedure this confers the advantage of a decreased length of hospital stay[1]. UFE has been the subject of randomised control trials and a Cochrane Review [1-4] and in 2013, a collaborative document was produced between the Royal College of Radiologists (RCR) and the Royal College of Obstetricians and Gynaecologists (RCOG), which sets out clinical recommendations of UFE [4]. NICE also recommends that fibroid embolisation is provided in the context of regular audit [6].

## The Cycle

**The standard:**

• Patients should have an MRI prior to treatment and be seen by a radiologist in the outpatient setting

• The procedure should not be contraindicated in treated patients

• A consent form and surgical safety checklist should be completed

• There should be high technical rates of success and low screening time/radiation dose

• The majority of patients should be discharged within 24 hours of the procedure with low complication rate

• Patients should be followed up in an outpatient clinic or over the telephone

**Target:**

• Pre-procedural MRI 100%

• Seen by radiologist in an OP setting 100%

• Documentation completed 100%

• Technical success >90%

• Procedure time < 90mins and DAP < 450 Gycm2 >80%

• Length of stay <24h >85%

• Minor complications: haematoma, thrombosis, dissection, pseudoaneurysm <5%, post embolisation syndrome requiring readmission <5%, vaginal discharge <16%, fibroid expulsion <10%, endometritis <5%, amenorrhoea <7% 1 year

• Serious complications e.g. hysterectomy <1%

• Clinic or telephone F/U >90%

## Assess local practice

**Indicators:**

- Meeting the standard for the above criteria, ie. Pre-procedural MRI, Seen by Radiologist, documentation, procedure time and dose, length of stay, complications etc

- Technical success is defined as the occlusion of blood flow in the uterine arteries bilaterally

- Technical aspects may vary between centres and include catheter and sheath size, embolic agent used/particle size, whether a closure device was used

**Data items to be collected:**

A minimum of the aforementioned items using a proforma is recommended.

**Suggested number:**

≥20 consecutive patients.

**Suggestions for change if target not met:**

1. Oral presentation at departmental audit meeting

2. Educational posters in the department

3. Invite speakers from other departments who have favourable audit results

**Resources:**

5 hours for data collection

2 hours for analysis

**References:**

1. Gupta JK, Sinha A, Lumsden MA, Hickey M. Uterine artery embolization for symptomatic uterine fibroids. Cochrane Database of Systematic Reviews 2014, Issue 12.
2. Masciocchi, C., Arrigoni, F., Ferrari, F., Giordano, A., Iafrate, S., Capretti, I., Cannizzaro, E., Reginelli, A., Ierardi, A., Floridi, C., Angileri, A., Brunese, L. and Barile, A. (2017). Uterine fibroid therapy using interventional radiology mini-invasive treatments: current perspective. Medical Oncology, 34(4).
3. Silberzweig, J., Powell, D., Matsumoto, A. and Spies, J. (2016). Management of Uterine Fibroids: A Focus on Uterine-sparing Interventional Techniques. Radiology, 280(3), pp.675-692.
4. de Bruijn, A., Ankum, W., Reekers, J., Birnie, E., van der Kooij, S., Volkers, N. and Hehenkamp, W. (2016). Uterine artery embolization vs hysterectomy in the treatment of symptomatic uterine fibroids: 10-year outcomes from the randomized EMMY trial. American Journal of Obstetrics and Gynecology, 215(6), pp.745.e1-745.e12.
5. Clinical recommendations on the use of uterine artery embolisation (UAE) in the management of fibroids Royal College of Radiologists/Royal College of Obstetricians and Gynaecologists 2013: <https://www.rcog.org.uk/globalassets/documents/guidelines/23-12-2013_rcog_rcr_uae.pdf>
6. NICE guidance: Uterine artery embolisation for fibroids. Interventional procedures guidance [IPG367]. Published November 2010

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