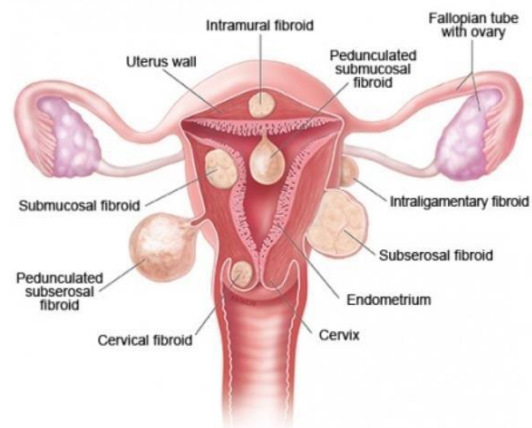


# Update on Surgery for Uterine Fibroids

Fibroid, also called **myoma** or **leiomyoma**, is a common, slow-growing, non-cancerous (*benign*) tumour of the uterus.

Fibroids are often asymptomatic, incidentally discovered during routine check and require no specific treatment other than periodic surveillance.

When located in certain location (submucosal) or unsuspectingly grown to become a large mass, fibroids can cause troublesome symptoms such as heavy menstrual bleeding, difficulty conceiving, voiding difficulty, abdominal swelling. In these situations, there are a wide range of **medical** and **surgical** treatment options to choose depending on individual circumstances.



As treatment of fibroids is rarely urgent, there should be ample time to undertake necessary investigations and to seek advice regarding available management options. Where conservative management for symptomatic fibroids proves ineffective or unsuitable, surgery treatment may be a suitable treatment to consider.

Fundamentally, surgical treatment for fibroids comes down to a decision between:

- I. Myomectomy - removal of fibroid or
- II. Hysterectomy -removal of the uterus

The decision on whether to undertake myomectomy or hysterectomy should take into consideration individual circumstances such as:

- childbearing intention
- fertility history
- personal belief and cultural value
- the nature, severity and impact of symptoms on quality of life
- the number, size and location of fibroid(s)
- the natural history and likely progression without treatment
- the benefits, risks and likely outcomes of the recommended treatment
- the benefits, risks and likely outcomes of non-surgical alternatives
- the level of skills and expertise of the treating doctor

At times, there may be difference of opinion amongst health professionals on whether or how fibroids should be treated, for example in case of unexplained infertility or rapid fibroid growth in the peri-menopausal years. In such situation, it is appropriate to seek advice from different specialists before making decision.

### **Myomectomy**

Women who wish to retain uterus for childbearing intention or for personal reason(s), myomectomy is an appropriate surgical option.

Depending on the location, size and number of fibroid(s), and the level of expertise and skills of the surgeon, fibroids can be removed by one or more of the following techniques:

- (i) Hysteroscopic myomectomy
- (ii) Laparoscopic or robotic myomectomy
- (iii) Open myomectomy (laparotomy)

#### **Hysteroscopic myomectomy**

- Type of fibroid: submucosal
- Indication: heavy menstruation, recurrent miscarriage, primary infertility
- Day surgery
- General anaesthesia
- Route: transvaginal
- Technique: hysteroscopy
- Fluid: for irrigation and distension of the endometrial cavity
- Risks: bleeding 1-2/100, uterine perforation (1/100), fluid overload and electrolyte imbalance (<1/100), infection (1/100), intra-uterine adhesion (1/100)

#### **Laparoscopic or robotic myomectomy**

- Types of fibroids: serosal, intramural, large submucosal fibroids
- General anaesthesia
- Route: small keyhole incisions through abdominal wall
- Hospital stay: one or two days
- Instrumentation: laparoscopic surgery
- Benefits over open surgery: small incisions, less pain, quicker recovery, less risk of intra-abdominal adhesion.
- Recovery: one to two weeks
- Specific requirements: Specialised skills and expertise in minimally invasive surgery for fibroid removal, uterine wall repair with sutures and tissue extraction.
- Fibroid tissue extraction: time-consuming
- Risk of fibroid tissue left behind (parasitic fibroid).

#### **Open myomectomy**

- Types of fibroids: serosal, intramural and some deep, large submucosal fibroids
- Route: abdominal large incision (laparotomy)
- General anaesthesia

- Hospital stay: several days
- Instrumentation: traditional open surgical instruments
- Recovery: up to 6 weeks

### **What are the risks of myomectomy?**

- Risks of bleeding, blood transfusion 1-2/100
- Risk of injury to adjacent organs (bladder, ureter, bowel) < 1/100
- Risk of conversion from keyhole to open surgery 1 to 2/100
- Risk of hysterectomy < 1/100
- Risk of infection 1/100
- Risk of deep vein thrombosis, pulmonary embolism 1/100 – 1/1000
- Risk of uterine wall weakness and rupture in late pregnancy or during labour ≤ 1/100
- Risk of fibroid recurrence – unpredictable, most often related to age
- Risk of unexpected uterine sarcoma – 1/200 -900

### **How does minimally invasive technique for myomectomy (laparoscopic or robotic) compare to open myomectomy for fibroids?**

Evidence from the 2014 Cochrane Review concluded that laparoscopic myomectomy is a procedure associated with:

- less subjectively reported postoperative pain
- lower incidence of postoperative fever
- shorter hospital stays compared with all types of open myomectomy.
- no difference in recurrence risk between laparoscopic and open myomectomy.
- more studies are needed to assess rates of uterine rupture, occurrence of thromboembolism, need for repeat myomectomy and hysterectomy at a later stage.

### **When should hysterectomy be considered for treatment of fibroids?**

Hysterectomy is an appropriate and definitive treatment for women who have:

- completed childbearing
- large or numerous fibroids
- fibroids of atypical appearance on imaging tests (suggestive of sarcoma)
- fibroids which grow after menopause (increased risk of sarcoma)
- recurrent fibroids
- unexpected life-threatening bleeding during myomectomy

### **Special attention regarding uterine tissue extraction**

On April 17, 2014, the US Food & Drug Administration (FDA) produced a **Safety Communication on Laparoscopic Uterine Power Morcellation in Hysterectomy and Myomectomy**. In it, the Communication stated that, “based on an FDA analysis of currently available data, it is estimated that **1 in 350 women undergoing hysterectomy or myomectomy for the treatment of fibroids is found to have an unsuspected uterine sarcoma**, a type of uterine cancer that includes leiomyosarcoma. **If laparoscopic power**

**morcellation is performed** in women with unsuspected uterine sarcoma, **there is a risk that the procedure will spread the cancerous tissue within the abdomen and pelvis**, significantly worsening the patient’s likelihood of long-term survival. For this reason, and **because there is no reliable method for predicting** whether a woman with fibroids may have a uterine **sarcoma, the FDA discourages the use of laparoscopic power morcellation** during hysterectomy or myomectomy for uterine fibroids”.

On **December 14, 2017, the FDA** releases new findings on the risks of spreading hidden uterine cancer through the use of laparoscopic power morcellators. In it, it stated that “after looking at all the relevant data, we believe our estimates remain accurate, and our **recommendation against the use of this device to remove fibroids** in the vast majority of women is **appropriate** and critical to better protecting these women”. Recent FDA update is available at <https://www.fda.gov/medical-devices/safety-communications/update-fda-recommends-performing-contained-morcellation-women-when-laparoscopic-power-morcellation>.

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At **CARE (Centre for Advanced Reproductive Endosurgery)**, **A/Professor Alan Lam and Dr Jessica Lowe** specialise in the assessment and management of fibroids, particularly in laparoscopic and hysteroscopic surgical management options.

At **CARE**, we have implemented a method of using a specimen containment bag to ensure that all fibroid tissues are extracted within the bag to avoid the risk of spreading unexpected uterine cancer including sarcoma.

For an **appointment** at **CARE**, please ring **9966 9121**

## References

1. Uterine fibroids: Overview <https://www.ncbi.nlm.nih.gov/books/NBK279535/>
2. Laparoscopic power morcellators <https://www.fda.gov/medical-devices/surgery-devices/laparoscopic-power-morcellators>
3. <https://www.fda.gov/medical-devices/safety-communications/update-fda-recommends-performing-contained-morcellation-women-when-laparoscopic-power-morcellation>