


# SURGICAL PROBLEMS IN FERTILITY- FIBROIDS

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- There is **NO** Industry Sponsorship and Financial Conflict of Interest for this presentation



My heart in medicine belongs to minimal  
invasive gyn surgery and ART

Performed procedures:

- > 1K Laparoscopy
- > 2K Hysteroscopy

**Work experience:**

- 2017 My Clinic Riga, Head of the Clinic, Gynaecologist and Obstetrician (specialization in gynaecology, reproductive medicine, infertility treatment, assisted reproductive technologies, gynaecological surgery)
- 2015-2017 Medical Centre ARS, Gynaecologist and Obstetrician (consultations in gynaecology, reproductive medicine, gynaecological surgery)
- 2014-2015 EGV Clinic, Head of the Clinic, Gynaecologist and Obstetrician (gynaecology, reproductive medicine, infertility treatment, assisted reproductive technologies)
- 2012-2018 Private Hospital Adazi, Kuldiga Hospital, Vidzeme Hospital, Talsi Hospital, Gynaecologist and Obstetrician (gynaecological surgery – laparoscopy (diagnostics, cystectomy, endometriosis, uterine fibroids, hysterectomy, resection of pelvic adhesions etc.)
- 2009-2014 EGV Clinic, Gynaecologist and Obstetrician (gynaecology, reproductive medicine, infertility treatment, assisted reproductive technologies)
- 2009-2012 Oncology Centre of Latvia, Residency training in oncogynaecology

## CONTENT

- ACTUALITY
- PATIENTS' COMPLAINTS
- SUBBCLASIFICATION SYSTEM OF LEIOMYOMAS
- FIBROID AND FERTILITY
- HYSTEROSCOPIC OPTIONS
- LAPAROSCOPIC OPTIONS

## ACTUALITY

- Uterine leiomyomata (fibroids) are benign tumors of uterine smooth muscle, are one of the most prevalent tumors of the female reproductive system.
- Uterine myoma is diagnosed in: **25%–30%** of females during their lives.
- Uterine myomas may contribute to infertility in **5%–10%** of women.
- Myomas are also estimated to be the cause of approximately **7%** of recurrent spontaneous abortions.

[Mahesh J Fuldeore](#), [Ahmed M Soliman](#). Patient-reported prevalence and symptomatic burden of uterine fibroids among women in the United States: findings from a cross-sectional survey analysis. *Int J Womens Health*. 2017; 9: 403–411.

Mettler L, Schollmeyer T, Tinelli A, Malvasi A, Alkatout I. Complications of uterine fibroids and their management, surgical management of fibroids, laparoscopy and hysteroscopy versus hysterectomy, haemorrhage, adhesions, and complications. *Obstet Gynecol Int* 2012;2012:791248. [[PMC free article](#)][[PubMed](#)]

Kolankaya A, Arici A. Myomas and assisted reproductive technologies: When and how to act? *Obstet Gynecol Clin North Am* 2006;33:145–152 [[PubMed](#)]

Khaund A, Lumsden MA. Impact of fibroids on reproductive function. *Best Pract Res Clin Obstet Gynaecol* 2008;22:749–760 [[PubMed](#)]

## PATIENTS' COMPLAINS

- Menorrhagia
- Anaemia
- Pressure symptom
- Pelvic pain
- Pain on intercourse
- Bladder frequency/incontinence
- Planning pregnancy/subfertility

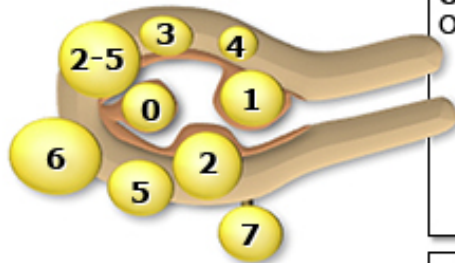
## PALM-COEIN subclassification system for leiomyomas

Polyp
Adenomyosis
Leiomyoma
Malignancy & hyperplasia

Submucosal
Other

Coagulopathy
Ovulatory dysfunction
Endometrial
Iatrogenic
Not yet classified

### Leiomyoma subclassification system



SM - Submucosal	0	Pedunculated intracavitary
	1	Intramural
O - Other	2	Subserosal ≥50 percent intramural
	3	Contacts endometrium; 100 percent intramural
	4	Intramural
	5	Subserosal ≥50 percent intramural
	6	Subserosal <50 percent intramural
	7	Subserosal pedunculated
	8	Other (specify, eg, cervical, parasitic)
<b>Hybrid leiomyomas</b> (impact both endometrium and serosa)	Two numbers are listed separated by a hyphen. By convention, the first refers to the relationship with the endometrium while the second refers to the relationship to the serosa. One example is below. Submucosal and subserosal, each with a size greater than half the diameter in the endometrial and peritoneal cavities, respectively.	

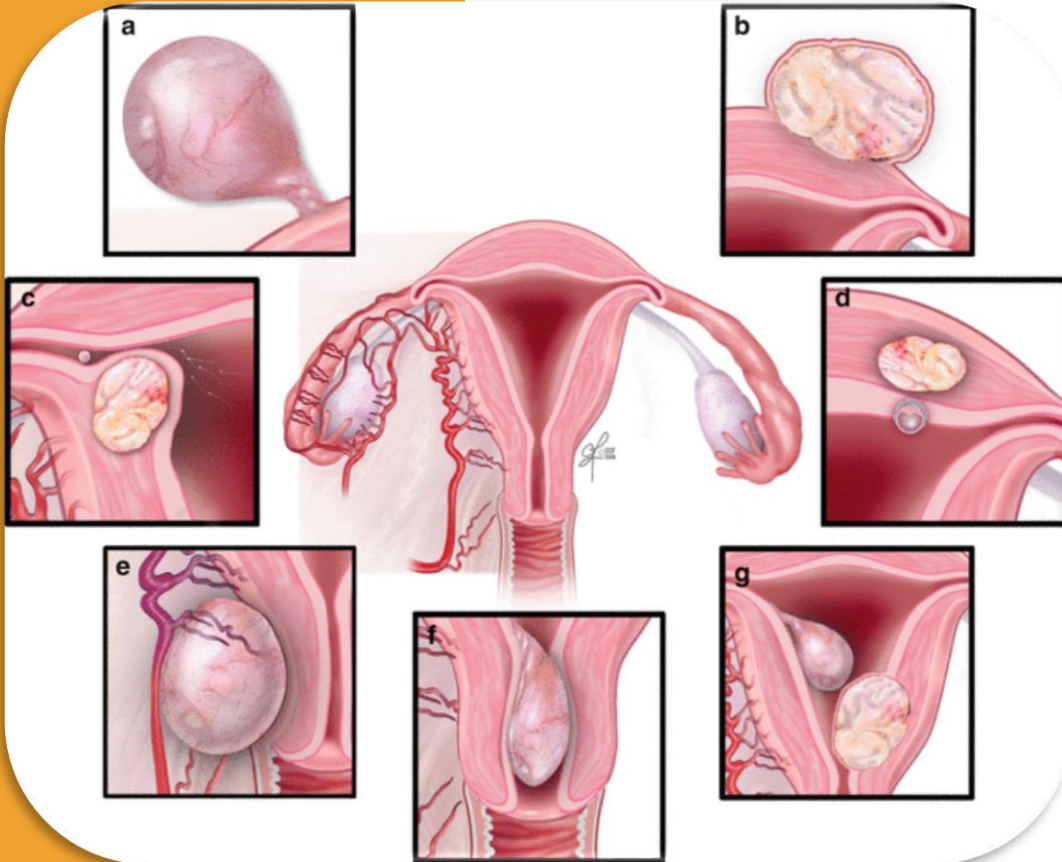
Hysteroscopy

Laparoscopy

From: Munro MG. *Abnormal Uterine Bleeding*. Cambridge: Cambridge University Press, 2010. Copyright © 2010 M. Munro. Reprinted with the permission of Cambridge University Press.

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## FIBROIDS AND FERTILITY



- Increased or disordered uterine contractility that may hinder sperm or embryo transport or nidation
- Altered tubo-ovarian anatomy, interfering with ovum capture
- Displacement of the cervix that may reduce exposure to sperm
- Enlargement or deformity of the uterine cavity that may interfere with sperm migration and transport
- Endometrial inflammation or secretion of vasoactive substances
- Distortion or disruption of the endometrium and implantation due to atrophy or venous ectasia over or opposite a submucous myoma
- Impaired endometrial blood flow
- Obstruction of the proximal fallopian tubes



Patient for  
Hysteroscopy:  
32 years old women,  
P=1,  
Ab=0,  
1,5 years infertility,  
Sperm analyse good,  
Ultrasound: S2  
submucosal fibroid  
4x3cm in front wall of  
uterus.

9month after surgery  
natural pregnancy.



# A

## HYSTEROSCOPIC SURGICAL PROBLEMS

# B

Prevalence	Risk
Very common (>1/10):	Bleeding
Common (>1/100 to <1/10):	Trauma to the uterus and cervix
Uncommon (>1/1000 to <1/100):	Infection
Seldom (>1/10000 to <1/1000):	Injury of nearby organs e.g. bowel, bladder.
Very seldom: (>1/100000 to <1/10000):	-

Prevalence	Risk
Very common (>1/10):	
Common (>1/100 to <1/10):	Intrauterine adhesions; S2 type fibroids are not removed totally in one step
Uncommon (>1/1000 to <1/100):	Fibroids at fundus are not removed totally
Seldom (>1/10000 to <1/1000):	
Very seldom: (>1/100000 to <1/10000):	

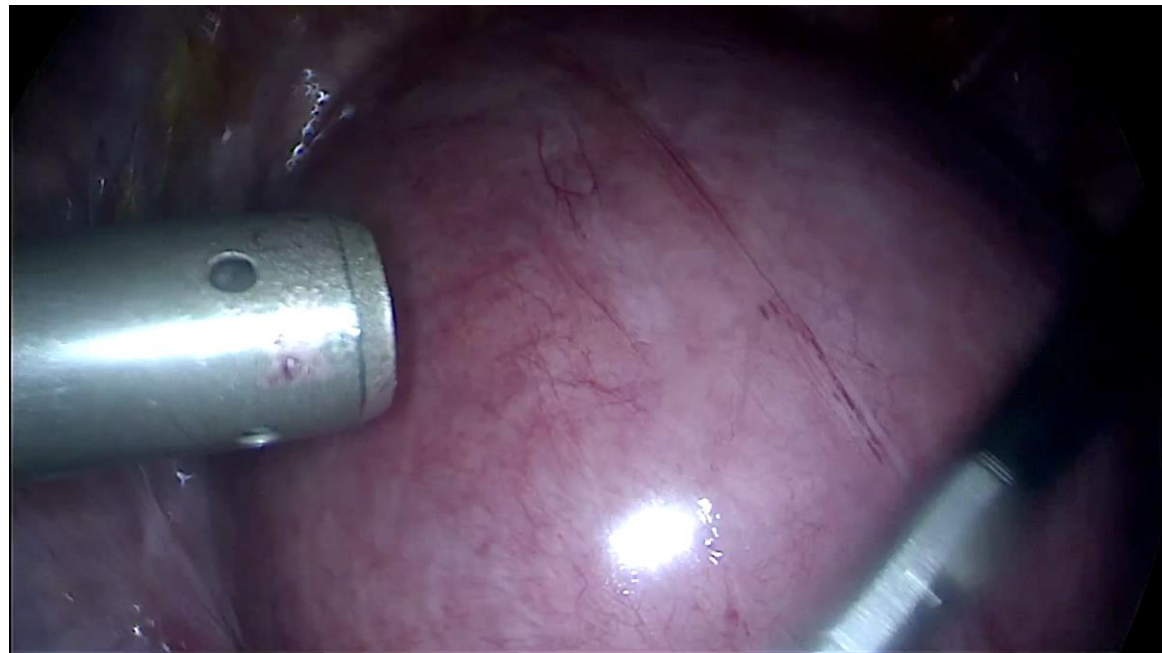
Patient for  
Laparoscopy:  
35 years old women,  
P=0,  
Ab=0,  
4 years infertility,  
Sperm analyse good,  
Ultrasound: O5  
fibroid 4x5cm in back  
side of uterus.

3month after surgery  
natural pregnancy,  
2018. may – S.C.



Patient for  
Laparoscopy:  
40 years old women,  
P=2,  
Ab=0,  
Pelvic pain,  
Ultrasound: O6  
fibroid 8x9 cm in  
fundus of uterus.

1 month after  
surgery hematoma in  
muscular layer  
7x6cm.



# A

## LAPAROSCOPIC SURGICAL PROBLEMS

# B

Prevalence	Risk
Very common (>1/10):	
Common (>1/100 to <1/10):	Adhesions
Uncommon (>1/1000 to <1/100):	Wound infection
Seldom (>1/10000 to <1/1000):	injury of nearby organs e.g. bowel, bladder, ureter
Very seldom: (>1/100000 to <1/10000):	

Prevalence	Risk
Very common (>1/10):	
Common (>1/100 to <1/10):	Myomectomy scar adhesions with omentum or bowels
Uncommon (>1/1000 to <1/100):	Weakness of scar on uterus
Seldom (>1/10000 to <1/1000):	Missed fibroids; Because of heavy bleeding do hysterectomy
Very seldom: (>1/100000 to <1/10000):	

## TREATMENT RESULTS

### HYSTEROSCOPIC

- 7 observational studies (n=329) showed a pregnancy rate 27-77%
- 75% of pregnancies in first 12 months

### LAPAROSCOPIC

- 1 study (185 patients; age 19-42 years, fibroids 5-15cm) reported 62.2% pregnancy rate with mean interval between surgery 24.6 +/-20 month

Submucous fibroids and infertility: Effect of hysteroscopic myomectomy and factors influencing outcome  
[K Jayakrishnan](#), [Vandana Menon](#),<sup>1</sup> and [Divya Nambiar](#)<sup>2</sup>; [J Hum Reprod Sci](#). 2013 Jan-Mar; 6(1): 35-39.  
doi: [10.4103/0974-1208.112379](#)

[Clin Exp Obstet Gynecol](#). 2014;41(4):375-9.

**Pregnancy outcome after laparoscopic myomectomy.**

[Fagherazzi S](#), [Borgato S](#), [Bertin M](#), [Vitagliano A](#), [Tommasi L](#), [Conte L](#).

## TAKE HOME MESSAGE

- Intramuscular non-cavity distorting fibroids could impair fertility, but evidence of benefit after removal is inconclusive (if multiple and over 4 cm, may warrant removal)
- Fibroids distorting the uterine cavity are likely to impair reproduction: warrant removal
- Subserosal fibroids: probably don't warrant removal.
- Submucosal fibroids causes sub-fertility & miscarriage: warrant hysteroscopic removal