



MRI-based pictorial review of the FIGO classification system for uterine fibroids

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Abstract

Uterine fibroids are the most common gynecologic neoplasm and contribute to significant morbidity, particularly when submucosal in location or large enough to cause bulk symptoms. Correctly classifying fibroids is essential for treatment planning and prevention of complications. Ultrasound is the first-line imaging modality for characterizing uterine fibroids. However, MRI allows for high-resolution, multiplanar visualization of leiomyomata that affords a more accurate assessment than ultrasound, particularly when fibroids are numerous. The FIGO system was developed in order to more uniformly and consistently describe and classify uterine fibroids. In this article, we review the MRI appearance of each of the FIGO classification types, detailing key features to report. Additionally, we present a proposed template for structured reporting of uterine fibroids based on the FIGO classification system.

Keywords Uterine fibroids · FIGO · Pelvic MRI

Introduction

Background

Uterine fibroids, also known as uterine leiomyomata or myomas, are the most common gynecologic tumors occurring in

20–30% of women of reproductive age [1] and in up to 80% of all women [2]. Anywhere from 20 to 50% of women may be symptomatic, presenting with abnormal uterine bleeding, dysmenorrhea, bulk symptoms, infertility and pregnancy loss [3]. Fibroids are monoclonal smooth muscle tumors arising from the myometrium. While benign, their growth is dependent on estrogen and progesterone levels, and thus fibroids may enlarge with pregnancy and use of oral contraceptives and regress during menopause [4].

Role of MRI

Ultrasound is the initial test of choice to assess the presence of fibroids in symptomatic patients [5]. For patients undergoing conservative treatment, an ultrasound may suffice. However, MRI provides a more accurate assessment of the number, location and type of fibroids [6, 7]. MRI is superior to ultrasound in evaluating patients with significant uterine enlargement as well as in the assessment of submucosal fibroids. Additionally, MRI may also be used as a problem-solving tool to differentiate between fibroids and their mimics, such as adenomyosis, ovarian neoplasms and focal myometrial contractions [8].

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Standard MRI protocol

At our institution, the standard MRI protocol for imaging the female pelvis in a patient with fibroids includes sagittal, axial and coronal T2-weighted images (T2WI), axial T1-weighted images (T1WI) and diffusion-weighted imaging (DWI), axial and sagittal pre- and post-contrast T1WI. The field of view for axial and sagittal images extends from hip joint to hip joint in the transverse dimension and from the iliac crests to the perineum craniocaudally. The coronal T2-weighted images are often used for troubleshooting and surgical planning by the gynecologic team. This protocol is outlined in Table 1. Coronal time-resolved angiography may be added if specifically ordered by the referring clinicians.

MRI features of fibroids

Uterine fibroids have a characteristic appearance on MRI. They are well circumscribed and typically demonstrate homogeneously low signal intensity on T2-weighted imaging compared to the myometrium [8]. Very cellular fibroids may have relatively high signal intensity on T2-weighted imaging. Enhancement is variable and is an important descriptor to include especially when planning uterine fibroid embolization (UFE) [9]. Fibroids with a prominent vascular supply will often demonstrate flow voids on T2-weighted imaging. Fibroids may undergo hyaline, cystic, fatty, myxoid or hemorrhagic degeneration [10].

Treatment options

Myriad treatment options are available for leiomyomata, including medical management, the goal of which is to downregulate the effects of circulating estrogen and progesterone. Medical management may aid in reducing associated menorrhagia or inducing amenorrhea as well as reducing the size of fibroids prior to surgical intervention [11].

Table 1 Standard MRI protocol for imaging the female pelvis in the setting of uterine fibroids

Plane	Sequence
3-plane	Scout
Sagittal	T2 sagittal
Axial	T1 axial
Axial	T2 axial
Axial	Diffusion
Sagittal	Pre-contrast
Axial	Pre-contrast
Axial	Post-contrast
Axial	Post-contrast
Sagittal	Post-contrast

Surgical management depends on multiple factors including patient symptoms, menopausal state, fibroid location and size and the desire to preserve fertility and/or retain the uterus. Surgical techniques for myomectomy include hysteroscopy, laparoscopy, minimal laparotomy, laparotomy, morcellation, or hysterectomy [12].

Additional therapies include uterine artery embolization (UAE) or occlusion and ablative techniques including MR-guided focused ultrasound (MRg-FUS) [13] and cryotherapy.

Traditional grading system

Traditionally, fibroids have been described based on their location as either submucosal, intramural or subserosal [5]. However, with recent advances in treatment, this simplified classification system lacks attention to important features which may result in suboptimal management. For example, a 100% intramural fibroid that contacts the endometrium may be miscategorized as a submucosal fibroid due to the endometrial abutment and planned for hysteroscopic resection. In many instances, a more detailed description is helpful for treatment planning, particularly in the setting of abnormal uterine bleeding.

FIGO classification system

The FIGO classification system was developed as a means of uniformly and consistently describing and classifying uterine fibroids in order to “facilitate communication, clinical care and research.” [14]. Accurately classifying uterine fibroids allows clinicians to select the best treatment plan for the patient, be it hysteroscopy, laparoscopy/laparotomy, or UAE. Precise classification is also necessary in the post-treatment setting in order to assess treatment response, change in overall tumor burden and presence of recurrent lesions. The FIGO classification system subdivides fibroids into submucosal, other (intramural and subserosal), and hybrid types (Table 2, Fig. 1).

Submucosal fibroids: FIGO types 0–2

Submucosal fibroids are located beneath the mucosal lining and are divided into FIGO 0, FIGO 1, and FIGO 2 based on the degree of intramural extension. Submucosal fibroids are a frequent cause of menorrhagia or dysmenorrhea as they protrude into the endometrial canal [15]. For women in their reproductive years, submucosal fibroids may also be a cause of infertility or pregnancy loss [16]. Because of this, submucosal fibroids may require treatment regardless of size. Management frequently includes hysteroscopic resection or

Table 2 FIGO fibroid classification system

Group	Type	Description
Submucosal	0	Pedunculated intracavitary
	1	< 50% intramural (\geq 50% submucosal)
	2	\geq 50% intramural (< 50% submucosal)
Other	3	100% intramural, contacting endometrium
	4	100% intramural, no endometrial or subserosal contact
	5	Subserosal, \geq 50% intramural
	6	Subserosal, < 50% intramural
	7	Pedunculated subserosal
	8	Non-myometrial location: e.g., cervical, broad ligament, parasitic
Hybrid	X–X	Both submucosal and subserosal components. First number designates the submucosal component and second number designates the subserosal component

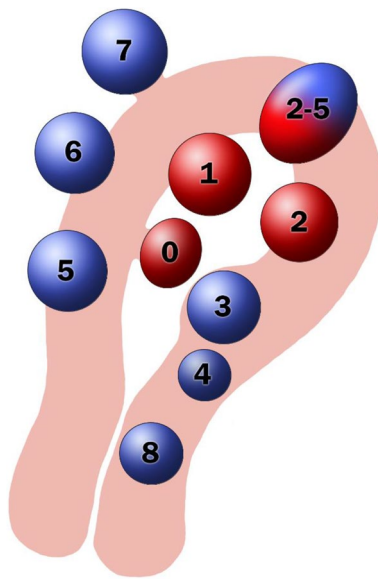


Fig. 1 FIGO fibroid subtypes. Submucosal fibroids (shown in red) include Type 0 (pedunculated intracavitary), Type 1 (\geq 50% submucosal), Type 2 (< 50% submucosal), and hybrid fibroids (here depicted as a Type 2–5 fibroid). Fibroids without submucosal components (shown in blue) include Type 3 (100% intramural fibroid with endometrial contact), Type 4 (100% intramural fibroid with no endometrial contact), Type 5 (\geq 50% intramural fibroid with subserosal component), Type 6 (< 50% intramural fibroid with subserosal component), Type 7 (pedunculated subserosal), and Type 8 (non-myometrial location, such as cervical, broad ligament, or parasitic fibroids)

UAE [17]. Occasionally hysterectomy may be an option for symptomatic patients no longer desiring pregnancy.

FIGO 0 fibroids are pedunculated intracavitary fibroids and are attached to the endometrium by a vascular stalk (Fig. 2). Identifying and measuring the stalk on MRI can be helpful during hysteroscopic resection [17]. On occasion after UAE, FIGO 0 and less frequently FIGO 1 fibroids can become necrotic and slough off into the endometrial canal [18].

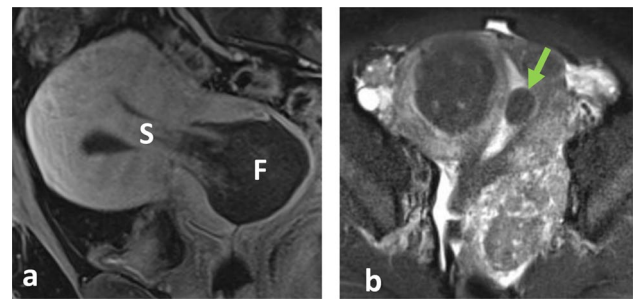


Fig. 2 FIGO 0—Intracavitary fibroid. **a** Post-contrast sagittal T1WI in a 36-year-old woman demonstrates an intracavitary fibroid prolapsing into the endocervical canal (F). A long stalk (S) is seen arising from the fundus. **b** Axial T2W SPAIR image in a 45-year-old woman demonstrates an intracavitary fibroid (arrow) surrounded by endometrium on all sides. The stalk was very short (not shown)

FIGO 1 fibroids are \geq 50% submucosal and < 50% intramural (Fig. 3), whereas FIGO 2 fibroids are < 50% submucosal and \geq 50% intramural (Fig. 4). Treatment is often hysteroscopic myomectomy. Differentiating FIGO 1 and FIGO 2 fibroids assists gynecologists during hysteroscopic removal as it provides better understanding of the intramural extent. Sonohysterography may be useful in clarifying the degree of intramural or endometrial involvement [5]. If large, hysteroscopic resection of FIGO 2 fibroids may be difficult, requiring a two-step surgery or uterine artery embolization [12]. Additionally, when evaluating FIGO 2 fibroids, it is important to assess the distance between the intramural component and the serosal surface. When the distance is less than 0.5 cm, some studies suggest a higher chance of uterine rupture during resection [19, 20].

Other fibroids: FIGO types 3–8

Under the FIGO classification, all fibroids lacking a submucosal component have been classified as “other”. This

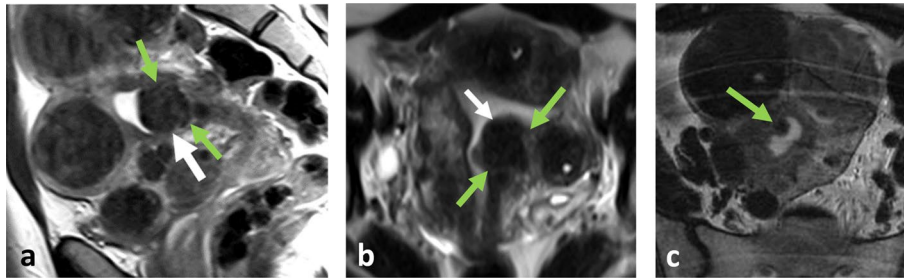


Fig. 3 FIGO 1 ($\geq 50\%$ submucosal) fibroid. **a, b** Sagittal and axial T2WIs in a 45-year-old woman demonstrate a leiomyomatous uterus with one fibroid (white arrows) with $\geq 50\%$ submucosal component. The extent of the submucosal component is denoted by green arrows.

c Axial T2WI in a 41-year-old woman also demonstrates leiomyomatous uterus with one of the fibroids having $\geq 50\%$ submucosal fibroid (arrow)

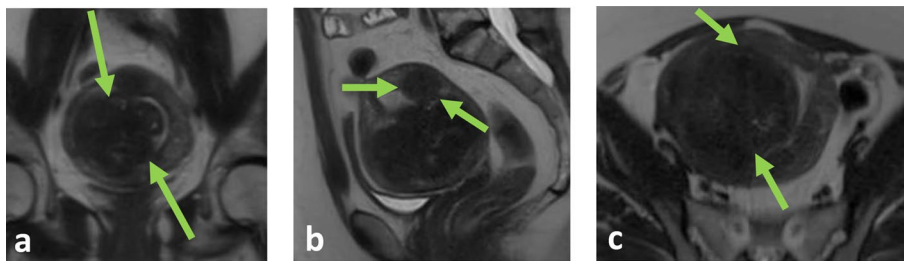


Fig. 4 FIGO 2 ($< 50\%$ submucosal) fibroid. **a** Coronal and **b** sagittal T2WI in a 47-year-old woman demonstrate a fibroid uterus with two fibroids having $< 50\%$ submucosal component (yellow arrows). **c**

Axial T2WI in a different 47-year-old woman demonstrates a large fibroid with just under 50% submucosal component. The extent of the submucosal component is denoted by green arrows

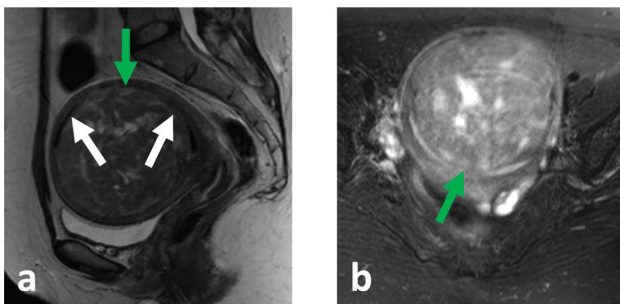


Fig. 5 FIGO 3—Intramural fibroid with endometrial contact. **a** Sagittal T2WI and **b** axial post-contrast fat-saturated T1WI in a 36-year-old woman with a large intramural fibroid in the anterior uterine wall. The fibroid significantly distorts the endometrium with most of the fibroid covered by a hypointense junctional zone (white arrows) and only a small portion contacting the endometrial canal (green arrows). FIGO 3 fibroids can occasionally be difficult to differentiate from a FIGO 2 when large; however, visualization of the junctional zone around most of the fibroid can be helpful

includes intramural and subserosal fibroids as well as lesions with extrauterine locations such as the cervix and broad ligament. Patients with non-submucosal fibroids will usually present with bulk symptoms or symptoms of mass effect on adjacent structures such as the bladder and colon. Treatment with UAE, myomectomy, or hysterectomy is offered [12].

FIGO 3 fibroids are unique in that they are 100% intramural and contact the endometrium but do not extend into the endometrial cavity (Fig. 5). Careful resection of FIGO 3 fibroids is required during laparoscopy or laparotomy to prevent violation of the endometrium [21].

FIGO 4 fibroids are 100% intramural without endometrial or serosal contact (Fig. 6). The “claw sign” of surrounding myometrium is a key finding on cross-sectional imaging of the pelvis. Distinguishing between FIGO 2, 3, and 4 types may be especially difficult when FIGO 3 and 4 fibroids are large and distort the endometrium. Accurately differentiating FIGO 2 from FIGO 3 and 4 types is key as the surgical approach differs; FIGO 2 fibroids are resected hysteroscopically, whereas FIGO 3 and 4 lesions are removed via laparoscopy or laparotomy (provided there is enough distance from the submucosa to prevent transmural incision) [21, 22]. Furthermore, this distinction may determine the extent of surgery, as FIGO 3 and 4 fibroids may be difficult to safely resect completely depending on their size [12]. Moreover, safe resection of FIGO 3 fibroids may be more difficult to achieve given endometrial contact. An example of a misclassified FIGO 3 fibroid is shown in Fig. 7.

Subserosal fibroids can be subdivided into FIGO types 5, 6, and 7 based on their intramural extent. These are often asymptomatic; however, patients may present with bulk

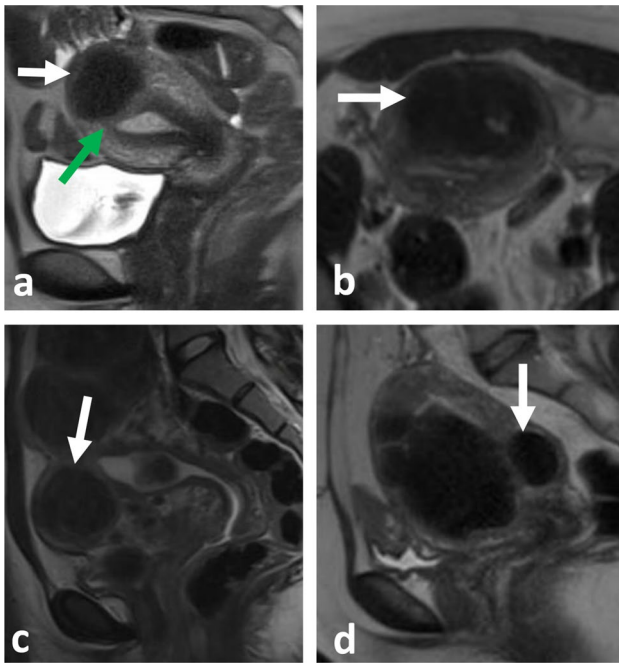


Fig. 6 FIGO 4–100% intramural fibroid without submucosal or subserosal component. **a–d** Multiple T2WIs in different patients demonstrating a well-circumscribed hypointense mass (white arrows) surrounded by intermediate intensity myometrium on all sides. In most cases, the junctional zone is maintained. Also note, in **a** the junctional zone is slightly distorted (green arrow); however, the fibroid does not contact the endometrium

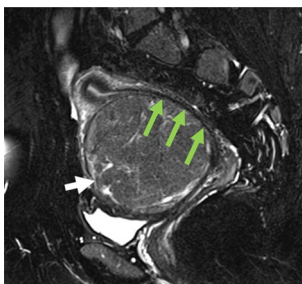


Fig. 7 Misclassified FIGO 3 Fibroid. 35-year-old woman with a solitary intramural fibroid. Sagittal T2WI demonstrates a 100% intramural fibroid in the anterior uterine body (white arrow) contacting and distorting the endometrium (FIGO type 3) (green arrows). The fibroid was initially incorrectly characterized as submucosal, leading to an unsuccessful attempt at hysteroscopic resection

symptoms when they become large. Treatment includes UAE, laparoscopic or open myomectomy, or targeted therapy [11]. Fibroids with $\geq 50\%$ intramural and $< 50\%$ subserosal components are classified as FIGO 5 (Fig. 8), whereas those with $< 50\%$ intramural and $\geq 50\%$ subserosal components are classified as FIGO 6 (Fig. 9).

FIGO 7 fibroids are pedunculated subserosal fibroids without an intramural component (Fig. 10). As the subserosal counterpart to the submucosal FIGO 0, FIGO 7 fibroids also have a vascular stalk. Patients with these fibroids typically are asymptomatic until the fibroids become large and exert mass effect on adjacent structures. Due to their vascular stalk, type 7 fibroids are also at risk of torsing, detaching and/or becoming parasitized in the pelvis [23]. Treatment options include UAE and surgery which includes resection by laparoscopy, laparotomy or hysterectomy. Type 6 and 7 fibroids may be expelled into the peritoneal cavity following UAE [24].

Extrauterine fibroids are classified as FIGO 8 (Fig. 11). These lesions may arise from the cervix, broad ligament, or may parasitize in the pelvis [23]. Parasitic fibroids may occur after surgery where small portions of the fibroids fall into the peritoneal cavity, more commonly seen with morcellation [25]. Treatment varies depending on location [12].

Hybrid fibroids

The hybrid classification is used when a fibroid extends from the submucosa to the serosa. Two numbers are listed, separated by a hyphen. The first number is used to characterize the relationship of the fibroid with the endometrium, the second with the serosa [14]. A commonly encountered hybrid type is FIGO 2–5, with a $< 50\%$ submucosal component and $< 50\%$ subserosal component. Due to size and extent, treatment includes targeted therapy such as MRg-FUS or UAE; however, the extent may necessitate hysterectomy. An example of a hybrid fibroid is shown in Fig. 12.

Discussion

Limitations of the FIGO classification system

While the FIGO classification system has provided clinicians with a more standardized framework for describing and characterizing uterine fibroids, significant inter-reader variability has been observed between gynecologists and radiologists alike when assigning FIGO types. Laughlin-Tomasso et al. [22] noted that with increasing size and number, classifications became more discrepant among clinicians, possibly due to distortion of uterine landmarks. In this study, a significant portion of fibroid misclassifications led to improper surgical planning. Because of this, it may be useful for radiologists to review patients' MRI of the pelvis with the treating gynecologic team prior to surgical intervention.

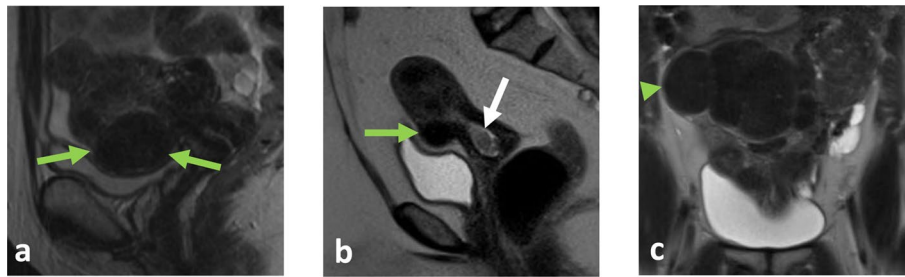
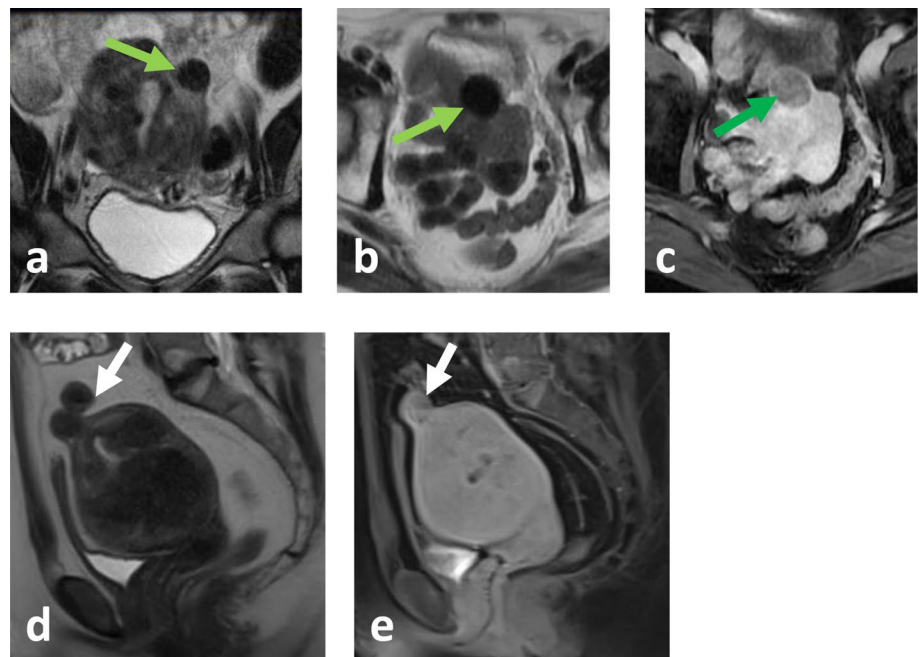


Fig. 8 FIGO 5 ($\geq 50\%$ intramural, $< 50\%$ subserosal) fibroid. **a, b** T2WI in two different women demonstrating intramural fibroids with approximately 50% intramural extent (green arrows). Differentiating FIGO 5 from FIGO 6 may be difficult when close to 50%; however, the distinction at this degree may be insignificant. Both women have

multiple additional fibroids including a FIGO 0 prolapsing intracavitary fibroid in **b** (white arrow). **c** Coronal T2WI in a 48-year-old woman demonstrating a fibroid which is about 60–70% intramural (green arrowhead)

Fig. 9 FIGO 6 ($< 50\%$ intramural, $\geq 50\%$ subserosal) fibroid. **a, b** Coronal and axial T2WIs in a 67-year-old woman demonstrate several small fibroids, of which two are $> 50\%$ subserosal (green arrows). **c** Axial post-contrast T1WI with fat saturation demonstrates only mild enhancement of the fibroid in **b** (green arrow). **d, e** Sagittal T2WI and post-contrast T1WI with fat saturation demonstrate a small fibroid at the fundus with $> 50\%$ subserosal extent and only a small intramural component (white arrows)



Proposed template

The FIGO classification system for uterine fibroids lends itself well to structured reporting. Incorporating the FIGO fibroid classifications into a radiology reporting template negates the need for radiologists to memorize the specific types. With the use of pick lists and drop-down menus, a fibroid reporting template can be set up in such a way that the radiologist can select a fibroid category from a drop-down menu based on its relationship to endometrium and serosa and the dictation software can be programmed to translate the selection into an appropriate FIGO classification. A proposed template is provided in Fig. 13.

Uterine size and number of fibroids

We recommend measuring the uterus in its anteroposterior, transverse and craniocaudal extent, as providing a three-dimensional uterine size can be useful in surgical planning [12]. Additionally, an estimation of the number of fibroids will determine if fibroid resection is feasible and reasonable for symptom control. Providing the size and number of fibroids may also help gynecologists estimate the likelihood that fibroids are the primary etiology of a patient's symptoms and determine the best surgical approach. When numerous, consider providing a range of 10 to 20 or greater than 20. While it is not necessary to describe every lesion, a minimum number should be chosen. We suggest describing up to three dominant non-submucosal and two dominant submucosal fibroids.

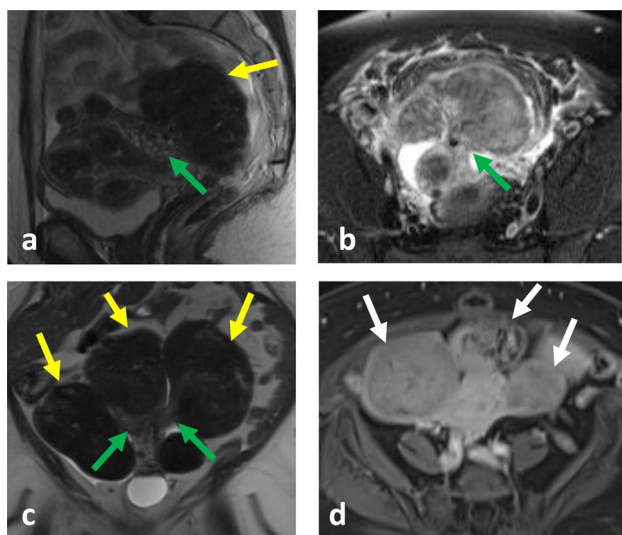


Fig. 10 FIGO 7—Subserosal pedunculated fibroid. **a** Sagittal T2WI in a woman with acute abdominal pain demonstrates a large pedunculated fibroid (yellow arrow) arising from the posterior wall of the uterus with bridging vessels (green arrow). **b** Axial T2 with fat suppression in the same woman shows mesenteric edema and pelvic ascites with suggestion of twisting of the stalk (green arrow), concerning fibroid torsion. **c** Coronal T2WI and **d** axial post-contrast T1WI demonstrate several pedunculated fibroids (yellow arrow) with a thick stalk and bridging vessels (green arrow) and moderate to marked enhancement (white arrows)

Location and degree of enhancement

In addition to the FIGO classification, the location of fibroids within the uterus should be described including laterality and anteroposterior position within a specific region of the uterus (fundus, body, lower uterine body). Furthermore, describing the enhancement pattern relative to the myometrium can aid in identifying patients who would benefit from UAE [9].

Fibroids derive their blood supply mainly from the uterine arteries. An additional supply to the fibroid may come from the ovarian artery. Time-resolved MR angiography can be performed to document vascularity of the uterine fibroids and show parasitized arteries providing flow to fibroids. Visualization of the ovarian artery implies vascular supply to a fibroid and can be a cause of treatment failure during UAE, and therefore, should be mentioned in the report [9].

Aggressive features

Careful attention should be given to uterine fibroids to differentiate from detect malignant lesions such as leiomyosarcoma. Leiomyosarcomas share many imaging features with benign leiomyomas, including increased signal on T2-weighted imaging if cystic or hemorrhagic degeneration is present. Misdiagnosing a malignant leiomyosarcoma as a benign uterine fibroid may be devastating for the patient, as these tumors generally behave aggressively, with

Fig. 11 FIGO 8—Non-myometrial location. **a–c** Sagittal T2WI, axial T2WI, and axial post-contrast T1WI demonstrate a small cervical fibroid (green arrows). The fibroid is only minimally enhancing (white arrow)

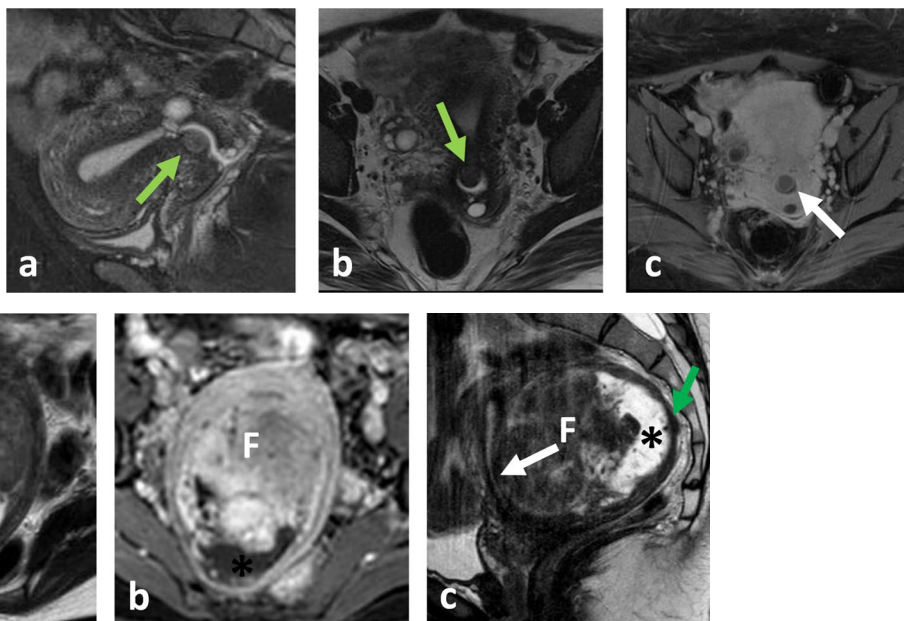


Fig. 12 FIGO 3–5—Hybrid fibroid. **a–c** Axial T2WI and post-contrast T1WI and sagittal T2WI in a 31-year-old woman demonstrate a large predominantly intramural fibroid (F). The fibroid contacts the

endometrium (FIGO 3—white arrow) and the serosa (FIGO 5—green arrowhead) representing a hybrid location. Also note the non-enhancing cystic degeneration in the posterior aspect (asterisk)

Fig. 13 Proposed template for structured reporting of uterine fibroids using the FIGO classification system

EXAM: [Procedures]

INDICATION: [Reason For Study]

TECHNIQUE: Axial T1 and T2-weighted, sagittal T2-weighted fat suppressed, coronal 3D T2-weighted, and pre- and post-contrast axial and sagittal T1-weighted fat suppressed MR images of the pelvis were obtained using a Pelvic coil. Diffusion weighted imaging (DWI) was performed with apparent diffusion coefficient (ADC) mapping.

COMPARISON: [comp]

FINDINGS:

Uterus: Measures [size of uterus on sagittal images] cm.
 Number of uterine fibroids: [uterine fibroids]. A total of [number of fibroids with submucosal components] fibroids have submucosal components.

Dominant fibroids WITHOUT submucosal component are described as follows (up to 3):

- [size] cm [FIGO type: 100% intramural, contacts endometrium/100% intramural, no endometrial contact/<50% subserosal/>= 50% subserosal/Subserosal pedunculated/Other (specify e.g. cervical, parasitic)] fibroid in the [location, series-slice and key image]: anterior/posterior/uterine body/fundus with [contrast: no/marked/minimal/moderate] contrast enhancement. [change in size compared to prior]. [any aggressive features]
- [size] cm [FIGO type: 100% intramural, contacts endometrium/100% intramural, no endometrial contact/<50% subserosal/>= 50% subserosal/Subserosal pedunculated/Other (specify e.g. cervical, parasitic)] fibroid in the [location, series-slice and key image]: anterior/posterior/uterine body/fundus with [contrast: no/marked/minimal/moderate] contrast enhancement. [change in size compared to prior]. [any aggressive features]
- [size] cm [FIGO type: 100% intramural, contacts endometrium/100% intramural, no endometrial contact/<50% subserosal/>= 50% subserosal/Subserosal pedunculated/Other (specify e.g. cervical, parasitic)] fibroid in the [location, series-slice and key image]: anterior/posterior/uterine body/fundus with [contrast: no/marked/minimal/moderate] contrast enhancement. [change in size compared to prior]. [any aggressive features]

Dominant fibroids WITH submucosal components are described as follows (up to 2):

- [size] cm [FIGO type: pedunculated intracavitary/>=50% submucosal/<50% submucosal/Hybrid fibroids (subserosal and submucosal components)] fibroid in the [location, series-slice and key image]: anterior/posterior/uterine body/fundus with [contrast: no/marked/minimal/moderate] contrast enhancement. Approximately [Describe % submucosal component] submucosal component. [change in size compared to prior]. [any aggressive features]
- [size] cm [FIGO type: pedunculated intracavitary/>=50% submucosal/<50% submucosal/Hybrid fibroids (subserosal and submucosal components)] fibroid in the [location, series-slice and key image]: anterior/posterior/uterine body/fundus with [contrast: no/marked/minimal/moderate] contrast enhancement. Approximately [Describe % submucosal component] submucosal component. [change in size compared to prior]. [any aggressive features]

Endometrium: Measures [thickness] mm. [mass]
 Junctional zone: Measures [thickness] mm.
 Cervix: [masses]
 Vagina: [masses]
 Ovaries: [size, symmetry, masses]

Lymph nodes: [size, location]

Other: [Other]

IMPRESSION:
 [impression]

[International Federation of Gynecology and Obstetrics (FIGO) fibroid typing:
 Type 0: Pedunculated intracavitary
 Type 1: <50% intramural (>=50% submucosal)
 Type 2: >=50% intramural (<50% submucosal)
 Type 3: 100% intramural, contacts endometrium
 Type 4: 100% intramural, no endometrial contact
 Type 5: Subserosal >=50% intramural (<50% subserosal)
 Type 6: Subserosal <50% intramural (>=50% subserosal)
 Type 7: Subserosal pedunculated
 Type 8: Other (specify e.g. cervical, parasitic)]

variable prognosis based on their histologic subtype [26]. Distinguishing features of leiomyosarcoma on MRI include ill-defined, infiltrative nature of the lesion, irregular margins, rapid growth and areas of internal necrosis [27]. After

contrast administration, leiomyosarcomas typically demonstrate early, heterogeneous enhancement on T1-weighted imaging. Diffusion sequences may be used in conjunction with T2-weighted imaging to reliably distinguish benign

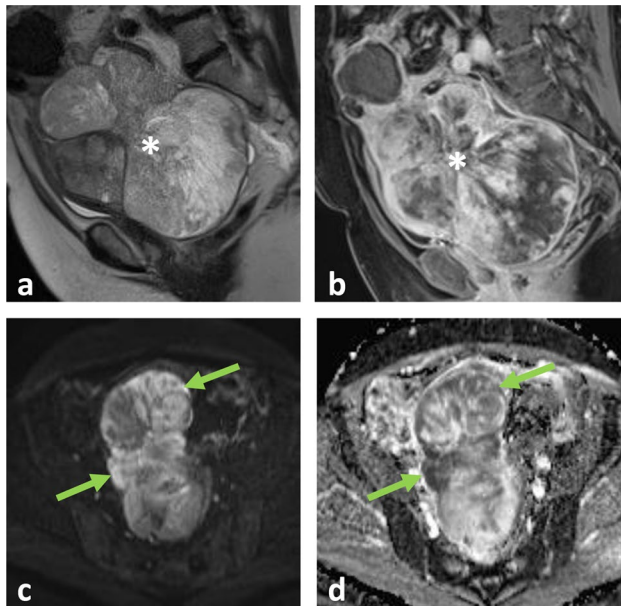


Fig. 14 Leiomyosarcoma. Sagittal T2-weighted (a) and T1 post-contrast (b) images of the pelvis demonstrate an infiltrative, irregular mass (asterisk) with areas of intermediate T2 signal and heterogeneous enhancement. Diffusion-weighted imaging (c) and ADC map (d) demonstrate corresponding areas of high and low signal intensity, respectively, compatible with diffusion restriction

from malignant lesions [28], as leiomyosarcomas often demonstrate more intermediate or heterogeneous T2 signal, have higher signal intensity on DWI sequences and lower signal intensity on the corresponding ADC maps (Fig. 14). Presence of locoregional adenopathy may also support the diagnosis of leiomyosarcoma in difficult cases, and survey for pelvic lymphadenopathy should be routinely performed.

Conclusion

Characterization of fibroids according to the FIGO classification system aids gynecologists in treatment planning and has the potential to avoid possible complications and treatment failure. MRI has clear value over ultrasound in assessing fibroids for treatment planning in majority of cases. Creating a standardized radiology template for describing fibroids based on the FIGO classification system avoids the need for memorizing the FIGO types and allows radiology practices to be more consistent in their reporting. Incorporating the FIGO system into a standardized radiology template can reduce fibroid miscategorization and improve communication with referring clinicians.

Author contributions All authors contributed to the study conception and design. Material preparation and image collection were performed by EG, MLN, and DF. The first draft of the manuscript was written by EG and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Data availability All data and materials support the published claims and comply with field standards.

Compliance with ethical standards

Conflict of interest The authors declare that they have no competing interest.

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