

**American College of Radiology  
ACR Appropriateness Criteria®**

**Management of Uterine Fibroids**

**Variant 1: Reproductive age patient with uterine fibroids, symptomatic with heavy uterine bleeding or bulk symptoms (eg, pressure, pain, fullness, bladder, or bowel symptoms), and a desire to preserve fertility. Initial therapy.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Medical management	Usually appropriate	Strong	N/A	N/A	7	7	1	0	0	0	2	1	4	2	1
			References				Study Quality								
			32 (33567071)				2								
			31 (32748236)				3								
			30 (33715871)				1								
			29 (24630081)				1								
			28 (22296075)				1								
			27 (30969201)				1								
			26 (30303900)				1								
			25 (33596357)				1								
			24 (31468503)				1								
			23 (32459423)				1								
			22 (31971678)				1								
			21 (31594635)				1								
			20 (34711224)				1								
			19 (30303923)				1								
			18 (28579415)				1								
			17 (25516866)				4								
			16 (34011888)				4								

MR-guided high-frequency focused ultrasound ablation	Usually appropriate	Strong	N/A	N/A	7	7	0	0	1	1	1	2	5	1	0
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References	Study Quality
41 (19013566)	4
40 (30217580)	2
39 (24075785)	2
38 (24998103)	2
37 (28421665)	1
36 (28063909)	1
35 (30696556)	1
34 (26658133)	1
33 (29628611)	4

Uterine artery embolization	Usually appropriate	Strong	N/A	N/A	7	7	0	0	1	0	0	2	6	1	1
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References	Study Quality
5 (34877531)	1
47 (17943348)	2
46 (28608747)	2
45 (34058169)	4
44 (27966042)	1
43 (33197612)	Good
42 (23070101)	1
13 (27393268)	1
6 (32726530)	4

Hysteroscopic myomectomy	Usually appropriate	Strong	N/A	N/A	7	7	0	0	1	0	1	1	5	1	2
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References	Study Quality
11 (35216832)	2
10 (24303914)	2
9 (15760959)	1
8 (25172985)	4

					7 (16603437)	1												
					6 (32726530)	4												
					5 (34877531)	1												
					4 (31678093)	2												
					3 (32532486)	3												
Laparoscopic or open myomectomy	Usually appropriate	Strong	N/A	N/A	7	7	0	0	1	0	0	2	4	3	1			
		References			Study Quality													
					4 (31678093)	2												
					12 (32192462)	Good												
					11 (35216832)	2												
					13 (27393268)	1												
					14 (27896247)	4												
Laparoscopic uterine artery occlusion	Usually not appropriate	Limited	N/A	N/A	2	2	4	2	4	1	0	0	0	0	0			
		References			Study Quality													
					15 (22526109)	2												
Endometrial ablation	Usually not appropriate	Limited	N/A	N/A	1	1	7	1	3	0	0	0	0	0	0			
		References			Study Quality													
					2 (28952185)	Inadequate												
Hysterectomy	Usually not appropriate	Expert Consensus	N/A	N/A	1	1	10	1	0	0	0	0	0	0	0			

**Variant 2: Reproductive age patient with uterine fibroids, symptomatic with heavy uterine bleeding or bulk symptoms (eg, pressure, pain, fullness, bowel, or bladder symptoms), and no desire for future fertility. Initial therapy.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations											
							1	2	3	4	5	6	7	8	9			
Medical management	Usually appropriate	Strong	N/A	N/A	7	7	0	1	0	0	1	0	5	2	2			

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations												
							1	2	3	4	5	6	7	8	9				

References	Study Quality
32 (33567071)	2
31 (32748236)	3
30 (33715871)	1
29 (24630081)	1
28 (22296075)	1
27 (30969201)	1
26 (30303900)	1
25 (33596357)	1
24 (31468503)	1
23 (32459423)	1
22 (31971678)	1
21 (31594635)	1
20 (34711224)	1
19 (30303923)	1
18 (28579415)	1
17 (25516866)	4
16 (34011888)	4

MR-guided high-frequency focused ultrasound ablation	Usually appropriate	Strong	N/A	N/A	7	7	0	0	1	1	1	2	6	0	0
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References	Study Quality
40 (30217580)	2
39 (24075785)	2
38 (24998103)	2
37 (28421665)	1
36 (28063909)	1
35 (30696556)	1





			67 (21717251)			2														
			66 (28516272)			2														
			65 (21850565)			2														
Hysterectomy	May be appropriate	Strong	N/A	N/A	6	6	0	0	0	0	3	4	3	0	1					
		References			Study Quality															
			58 (26272688)			4														
			57 (26264829)			Good														
			56 (22269187)			4														
			55 (33259542)			1														
			54 (20526776)			2														
			53 (32376318)			2														
			52 (31479034)			1														
			51 (29286988)			2														
			50 (27335259)			4														
MR-guided high-frequency focused ultrasound ablation	Usually not appropriate	Expert Consensus	N/A	N/A	3	3	4	1	4	1	0	0	1	0	0					
Endometrial ablation	Usually not appropriate	Limited	N/A	N/A	2	2	4	2	4	1	0	0	0	0	0					
		References			Study Quality															
			59 (25460320)			1														
Laparoscopic uterine artery occlusion	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	5	2	1	0	3	0	0	0	0					
Hysteroscopic myomectomy	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	3	3	1	2	1	0	1	0	0					
Laparoscopic or open myomectomy	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	2	7	2	0	0	0	0	0	0					

**Variant 4: Reproductive age patient with pedunculated submucosal uterine fibroids, symptomatic with heavy uterine bleeding. Initial therapy.**





MR-guided high-frequency focused ultrasound ablation	May be appropriate	Strong	N/A	N/A	5	5	0	1	1	2	3	3	1	0	0	
		References		Study Quality												
		72 (19640736)		2												
		71 (23099002)		2												
		70 (32676291)		4												
Hysterectomy	Usually not appropriate	Limited	N/A	N/A	3	3	2	0	5	3	1	0	0	0	0	
		References		Study Quality												
		50 (27335259)		4												
Endometrial ablation	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	5	3	1	1	0	1	0	0	0	
Laparoscopic uterine artery occlusion	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	5	2	2	2	0	0	0	0	0	
Laparoscopic or open myomectomy	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	4	2	4	1	0	0	0	0	0	

**Variant 5: Postmenopausal patient with uterine fibroids, symptomatic with heavy uterine bleeding or bulk symptoms (eg, pressure, pain, fullness, bladder, or bowel symptoms). Negative endometrial biopsy. Next step.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Hysterectomy	Usually appropriate	Strong	N/A	N/A	8	8	1	0	0	0	0	0	4	1	5
		References		Study Quality											
		57 (26264829)		Good											
		56 (22269187)		4											
		55 (33259542)		1											
		54 (20526776)		2											
		51 (29286988)		2											

		50 (27335259)			4													
Uterine artery embolization	May be appropriate	Limited	N/A	N/A	6	6	0	0	0	1	3	5	2	0	0			
		References			Study Quality													
		76 (31834160)			4													
		75 (25765878)			3													
		74 (26372352)			4													
Laparoscopic or open myomectomy	May be appropriate	Expert Consensus	N/A	N/A	6	6	0	0	0	0	4	7	0	0	0			
Hysteroscopic myomectomy	May be appropriate	Strong	N/A	N/A	5	5	0	0	1	0	5	4	1	0	0			
		References			Study Quality													
		5 (34877531)			1													
		4 (31678093)			2													
		3 (32532486)			3													
MR-guided high-frequency focused ultrasound ablation	Usually not appropriate	Expert Consensus	N/A	N/A	3	3	3	2	2	1	2	0	1	0	0			
Endometrial ablation	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	3	3	2	2	1	0	0	0	0			
Medical management	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	2	4	1	2	2	0	0	0	0			
Laparoscopic uterine artery occlusion	Usually not appropriate	Expert Consensus	N/A	N/A	2	2	5	2	2	1	1	0	0	0	0			

**Variant 6: Reproductive age patient with uterine fibroids desiring pregnancy and experiencing reproductive dysfunction. Initial therapy.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations											
							1	2	3	4	5	6	7	8	9			
Hysteroscopic myomectomy	Usually appropriate	Strong	N/A	N/A	7	7	1	0	0	0	0	3	4	1	2			



		2 (28952185)		Inadequate											
Hysterectomy	Usually not appropriate	Expert Consensus	N/A	N/A	1	1	9	1	0	0	0	0	0	0	1

## **Appendix Key**

A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

**Appropriateness Category:** The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

**SOE:** Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References:** The citation number and PMID for the reference(s) associated with the recommendation.
- **Study Quality:** The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

**RRL:** Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

**Rating:** The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Median:** The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Final tabulations:** A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at [www.acr.org/ac](http://www.acr.org/ac).