American College of Radiology ACR Appropriateness Criteria®

Staging and Follow-up of Vulvar Cancer

Variant 1: Initial staging of pretreatment vulvar cancer: Primary tumor is less than or equal to 2 cm, confined to the vulva or perineum, and with less than or equal to 1 mm stromal invasion.

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Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI pelvis without and with IV contrast	Usually not appropriate	Expert Opinion	O 0 mSv	O 0 mSv [ped]	3	3	2	5	1	1	5	0	0	1	0
CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Opinion	୫୫୫ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	6	8	0	0	0	0	1	0	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	4	2	1	0	0	0	1	0
CT chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	���⊕ 10-30 mSv	���� 3- 10 mSv [ped]	2	2	7	3	2	1	0	0	1	1	0
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	2	2	7	5	1	1	0	0	0	1	0
CT pelvis with IV contrast	Usually not appropriate	Expert Opinion	୫୫୫ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	5	9	0	0	0	0	0	1	0
CT pelvis without IV contrast	Usually not appropriate	Expert Consensus	୫୫୫ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	3	1	1	2	0	0	1	0
MRI pelvis without IV contrast	Usually not appropriate	Expert Opinion	O 0 mSv	O 0 mSv [ped]	2	2	3	6	0	2	3	1	0	0	0

Lymphoscintigraphy groin	Usually not appropriate	Expert Consensus	�� 0.1-1mSv		2	2	6	4	2	2	0	0	1	0	0
US duplex Doppler and US-guided fine-needle aspiration biopsy groin	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	4	3	0	0	0	0	0	1
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	8	2	1	2	0	0	1	1	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	8	3	1	2	0	0	0	1	0
CT pelvis without and with IV contrast	Usually not appropriate	Expert Opinion	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	4	0	0	0	1	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	2	1	1	0	1	0	1	0
Radiography chest	Usually not appropriate	Expert Consensus	⊕ <0.1 mSv		1	1	10	2	1	2	0	0	0	0	0
US-guided fine needle aspiration biopsy groin	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	4	1	1	0	0	0	0	1
US duplex Doppler groin	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	4	2	0	0	0	0	1	0

Variant 2: Initial staging of pretreatment vulvar cancer: Primary tumor is less than or equal to 4 cm with greater than 1 mm stromal invasion, confined to vulva or perineum, or with minimal involvement of the urethra, vagina, or anus.

D 1	Appropriateness	305	4.1.14 BDI	D I DDI	D (1	3.6.11			F	inal '	Гаbu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI pelvis without and with IV contrast	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	0	1	8	3	3
		References		Study	, Quality		-					-			

		32 (20092880)			2										
		31 (11804896)			3										
		33 (16859737)			3										
		34 (16803503)			2										
		35 (12409110)			3										
		6 (-3165329)		1	4										
Lymphoscintigraphy groin	May be appropriate	Strong	⊕⊕ 0.1-1mSv		6	6	0	1	0	0	2	6	3	2	1
		References		Study	Quality										
		23 (22753905)			2										
		21 (25703673)			4										
		19 (20537946)			2										
		6 (-3165329)			4										
MRI pelvis without IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	1	1	0	5	1	6	1	0
	-	References		Study	Quality										
		32 (20092880)		-	2										
		31 (11804896)			3										
		33 (16859737)			3										
		34 (16803503)			2										
		35 (12409110)			3										
		6 (-3165329)			4										
US duplex Doppler and US-guided fine-needle aspiration biopsy groin	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	4	4	2	3	1	1
		References		Study	Quality										
		36 (23932893)			3										
		38 (12727164)			3										
		25 (16445651)		3											
		37 (10453840)													

CT pelvis with IV contrast	Usually appropri		Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	3	3	3	4	5	1	1	0	0	1	0
			References		Study	y Quality										
			25 (16445651)			3										
			6 (-3165329)			4										
US-guided fine needle aspiration biopsy groin	Usually appropri		Limited	O 0 mSv	O 0 mSv [ped]	3	3	1	4	5	0	5	0	0	0	0
			References		Study	y Quality										
			36 (23932893)			3										
			38 (12727164)			3										
			25 (16445651)			3										
			37 (10453840)			3										
US duplex Doppler groin	Usually appropri		Limited	O 0 mSv	O 0 mSv [ped]	3	3	3	4	3	2	2	0	0	1	0
		·	References		Study	y Quality		•								
			36 (23932893)			3										
			38 (12727164)			3										
			25 (16445651)			3										
			37 (10453840)			3										
CT abdomen and pelvis with IV contrast	Usually appropri		Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	4	8	1	0	1	0	0	1	0
			References		Study	y Quality										
			25 (16445651)			3										
		25 (16445651) 6 (-3165329)				4										
CT abdomen and pelvis without IV contrast	Usually appropri		Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	5	1	1	0	0	0	1	0
		References			Study	y Quality										
		25 (16445651)				3										
		6 (-3165329)				4										

CT chest abdomen pelvis with IV contrast	Usually appropri		Limited	���� 10- mSv	30	���� 3- 10 mSv [ped]	2	2	5	8	0	0	1	0	0	1	0
			References			Study	Quality										
			26 (26059775)				3										
			25 (16445651)				3										
			6 (-3165329)				4										
FDG-PET/CT skull base to mid-thigh	Usually appropri		Strong	���� 10- mSv	30	���� 3- 10 mSv [ped]	2	2	7	2	2	2	1	0	0	0	1
			References			Study	Quality										
			30 (26790773)				3										
			27 (24984533)				3										
			29 (25477274)				2										
			28 (28930828)				3										
			6 (-3165329)				4										
CT abdomen and pelvis without and with IV contrast	Usually appropri		Limited	���� 10- mSv	30	≎≎≎≎≎ 10-30 mSv [ped]	1	1	10	1	1	1	1	0	0	1	0
			References			Study	Quality		•								
			25 (16445651)				3										
			6 (-3165329)				4										
CT chest abdomen pelvis without IV contrast	Usually appropri		Limited	���� 10- mSv	30	���� 3- 10 mSv [ped]	1	1	9	3	1	1	0	0	0	1	0
			References			Study	Quality										
			26 (26059775)				3										
			25 (16445651)				3										
			6 (-3165329)				4										
CT chest abdomen pelvis without and with IV contrast	Usually appropri		Limited	���� 10- mSv	30	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	1	1	11	0	1	1	1	0	0	1	0
		References				Study	Quality										

		26 (26059775)				3										
		25 (16445651)				3										
		6 (-3165329)				4										
		Limited	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	8	2	3	1	0	0	0	1	0
		References			Study	Quality										
		25 (16445651)				3										
		6 (-3165329)				4										
		Limited	≎≎≎≎ 10- mSv	30	���� 3- 10 mSv [ped]	1	1	10	0	1	2	1	0	0	1	0
		References			Study	Quality										
		25 (16445651)				3										
		6 (-3165329)				4										
Usuall approp	y not oriate	Limited	⊕ <0.1 mS	Sv		1	1	10	1	1	0	3	0	0	0	0
		References			Study	Quality										
		26 (26059775)				3										
	Usuall approp	Usually not appropriate Usually not appropriate Usually not appropriate	25 (16445651) 6 (-3165329) Usually not appropriate	Usually not appropriate Limited Section 1-1 mSv References 25 (16445651) 6 (-3165329) Usually not appropriate Limited Description 2 mSv References 25 (16445651) 6 (-3165329) Usually not appropriate Limited Description 2 mSv Usually not appropriate Limited Description 2 mSv	25 (16445651) 6 (-3165329) Usually not appropriate	25 (16445651) 6 (-3165329) Usually not appropriate	25 (16445651) 3 4	25 (16445651) 3 4	25 (16445651) 3 4	25 (16445651) 3	25 (16445651) 3	25 (16445651) 3	25 (16445651) 3	25 (16445651) 3	Usually not appropriate	Usually not appropriate

Variant 3: Initial staging of pretreatment vulvar cancer: Primary tumor is greater than 4 cm or tumor of any size with more than minimal involvement of the urethra, vagina, or anus.

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Procedure	Categ		SOE	Adults RR	KL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI pelvis without and with IV contrast	Usua approp	.*	Strong O 0 mSv		/	O 0 mSv [ped]	8	8	0	0	0	0	0	1	3	6	5
			References			Study	Quality										
			32 (20092880)				2										
			31 (11804896)	31 (11804896)			3										
			33 (16859737)				3										

34 (16803503)

		35 (12409110)			3										
		6 (-3165329)			4										
CT chest abdomen pelvis with IV contrast	Usually appropriate	Limited	���� 10-30 mSv	���� 3- 10 mSv [ped]	7	7	1	0	0	0	3	3	4	4	0
		References		Study	Quality										
		26 (26059775)			3										
		25 (16445651)			3										
		6 (-3165329)			4										
FDG-PET/CT skull base to mid-thigh	Usually appropriate	Strong	❤❤❤❤ 10-30 mSv	���� 3- 10 mSv [ped]	7	7	1	0	0	0	1	1	8	3	1
		References		Study	Quality										
		30 (26790773)			3										
		27 (24984533)			3										
		29 (25477274)			2										
		41 (28751058)			3										
		6 (-3165329)			4										
CT abdomen and pelvis with IV contrast	May be appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	6	6	0	0	0	0	6	4	4	0	1
		References		Study	Quality										
		25 (16445651)			3										
		6 (-3165329)			4			1							
MRI pelvis without IV contrast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	1	4	3	6	1	0
		References		Study	Quality										
		32 (20092880)			2										
		31 (11804896)			3										
		33 (16859737)			3										
		34 (16803503)			2										
		35 (12409110)			3										
		6 (-3165329)			4										

CT abdomen and pelvis without IV contrast	May be appropriate (Disagreement)	Expert Opinion	��� 1-1 mSv	0	ॐॐॐ 3- 10 mSv [ped]	5	5	1	4	3	4	1	0	1	1	0
		References			Study	Quality										
		25 (16445651)				3										
		6 (-3165329)				4										
CT chest abdomen pelvis without IV contrast	May be appropriate (Disagreement)	Expert Opinion	���� 10- mSv	30	���� 3- 10 mSv [ped]	5	5	1	4	3	0	5	0	2	0	0
		References			Study	Quality										
		26 (26059775)				3										
		25 (16445651)				3										
		6 (-3165329)				4										
CT pelvis with IV contrast	May be appropriate	Limited	ଡ≎ଡ 1-1 mSv	0	���� 3- 10 mSv [ped]	5	5	1	0	0	2	6	3	3	0	0
		References				Quality										
		References 25 (16445651)			•	3										
		6 (-3165329)				4										
US-guided fine needle aspiration biopsy groin	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	1	O 0 mSv [ped]	5	5	1	2	6	0	3	2	1	0	0
		References			Study	Quality										
		36 (23932893)				3										
		38 (12727164)				3										
		25 (16445651)				3										
		37 (10453840)				3										
US duplex Doppler and US-guided fine-needle aspiration biopsy groin	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	′	O 0 mSv [ped]	5	5	0	0	4	0	3	2	4	1	1
		References			Study	Quality										
		36 (23932893)				3										
		38 (12727164)				3										
		38 (12/2/164) 25 (16445651)				3										

		37 (10453840)			3										
CT pelvis without IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	3	3	3	3	3	4	1	0	1	0	0
		References		Study	Quality										
		25 (16445651)			3										
		6 (-3165329)			4										
US duplex Doppler groin	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	5	2	2	2	2	1	0	1	0
		References		Study	Quality										
		36 (23932893)			3										
		38 (12727164)			3										
		25 (16445651)			3										
		37 (10453840)			3										
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	ଫେଫଫ 10-30 mSv	����� 10-30 mSv [ped]	2	2	4	4	6	0	0	0	1	0	0
		References		Study	Quality										
		25 (16445651)			3										
		6 (-3165329)			4										
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Limited	ଫେଫଫ 10-30 mSv	����� 10-30 mSv [ped]	2	2	4	8	2	0	0	0	0	1	0
		References		Study	Quality										
		26 (26059775)			3										
		25 (16445651)			3										
		6 (-3165329)			4										
CT pelvis without and with IV contrast	Usually not appropriate	Limited	���� 10-30 mSv	���� 3- 10 mSv [ped]	2	2	5	4	5	0	0	0	1	0	0
		References		Study	Quality										
		25 (16445651) 3													

			6 (-3165329)				4										
Radiography chest	Usuall approp	y not oriate	Limited	≎ <0.1 mS		≎ <0.03 mSv [ped]	2	2	4	4	2	1	3	0	1	0	0
			References			Study	y Quality										
			26 (26059775)				3										
Lymphoscintigraphy groin	Usuall approp	y not oriate	Limited	�� 0.1-1m	ıSv		2	2	6	4	3	0	0	0	1	0	0
			References			Study	y Quality										
			36 (23932893)				3										
			38 (12727164)				3										
			25 (16445651)	38 (12727164) 25 (16445651)			3										

Variant 4: Post-treatment assessment of clinically suspected recurrence of known vulvar cancer.

n 1	Appropri	riateness SOF Alaka P			_	D I DDI	D 41	N. 11	Final Tabulations											
Procedure	Category		SOE Adults R		RL Peds RRL		Rating	Median	1	2	3	4	5	6	7	8	9			
CT chest abdomen pelvis with IV contrast	Usually appropriate		Limited	���� 10-30 mSv				8	0	0	0	0	1	2	3	6	3			
			References Study Quality																	
			26 (26059775) 3								_									
MRI pelvis without and with IV contrast	Usually appropriate		Moderate	ote O 0 mSv		O 0 mSv [ped]	8	8	0	0	0	0	0	0	3	6	6			
		References			Study Quality															
		32 (20092880)			2															
		6 (-3165329)			4							_								
FDG-PET/CT skull base to mid-thigh	Usua approp		Strong	≎≎≎≎ 10∹ mSv	30	���� 3- 10 mSv [ped]	8	8	0	0	0	0	1	0	3	7	4			
		References			Study	Quality														
		30 (26790773)					3													

	Г		20 (25477274)			2											
			29 (25477274) 46 (23369941)	2													
			` '	2													
			45 (24257566) 41 (28751058)	2													
CT -1-1			41 (28/31038)		. 0000	3						I					
CT abdomen and pelvis with IV contrast	May b		Limited	��� 1-10 mSv	10 mS [ped]		6	6	1	0	0	0	5	6	0	2	1
			References		S	tudy Qu	ality										
			26 (26059775)			3			_								
MRI pelvis without IV contrast	May b		Moderate	O 0 mSv	O 0 mS [ped]	Sv	6	6	0	0	0	1	5	2	5	1	1
References					S												
		32 (20092880)			2												
	6 (-3165329)				4												
CT abdomen and pelvis without IV contrast	May b appropri (Disagreer	riate	Expert Opinion	��� 1-10 mSv	9		5	5	1	4	3	0	4	1	2	0	0
CT chest abdomen pelvis without IV contrast	May b appropri (Disagree	riate	Expert Opinion		30		5	5	2	4	2	0	4	1	1	1	0
CT pelvis with IV contrast	May b appropri (Disagree	y be priate Expert Opinion		��� 1-10 mSv)		5	5	1	0	1	1	9	1	0	1	1
CT pelvis without IV contrast	appropri	May be propriate agreement) Expert Opinion		��� 1-10 mSv)		5	5	2	4	2	4	1	0	1	0	1
US-guided fine needle aspiration biopsy groin	May b appropri (Disagreer	riate	Expert Opinion O 0 mSv		O 0 mS [ped]	SV	5	5	3	7	2	0	1	0	1	1	0
US duplex Doppler and US-guided fine-needle aspiration biopsy groin	May b appropri (Disagreer	riate	Expert Opinion O 0 mSv		O 0 mS [ped]	SV	5	5	0	4	0	0	5	3	1	1	1
CT abdomen and pelvis without and with IV contrast	Usually appropri		Expert Consensus			€	2	2	4	4	5	0	0	1	1	0	0

CT chest abdomen pelvis without and with IV contrast	Usually no appropriate		ଡଡଡଡ 10-3 mSv	60	2	2	4	4	6	0	0	0	0	0	1
CT pelvis without and with IV contrast	Usually no appropriate			30	2	2	3	9	2	0	0	0	0	1	0
Radiography chest	Usually no appropriate		⊕ <0.1 mS		2	2	7	2	3	0	2	0	0	1	0
		References		Study											
		26 (26059775)			3										
US duplex Doppler groin	Usually no appropriate		O 0 mSv	O 0 mSv [ped]	2	2	5	7	2	0	0	0	0	1	0

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.