American College of Radiology ACR Appropriateness Criteria®

Renal Failure

Variant 1: Renal failure. Acute kidney injury (AKI), unspecified. Initial imaging.

	Appropriaten	ess				3.5.31]	Final	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
US kidneys retroperitoneal	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	1	1	1	6	8
		References		Study	y Quality										
		31 (26581096)			3										
		27 (26283754)			4										
		4 (24011084)			3										
		30 (23751145)			3										
		28 (12008814)			4										
		29 (21098348)			3										
		3 ()			4										
		26 (416685)			2					1		1			
US duplex Doppler kidneys retroperitoneal	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	6	6	0	0	1	1	3	8	2	0	0
		References		Study	y Quality			•			•				
		34 (27133237)			2										
		36 (26728776)			2										
		35 (25746587)		(Good										
		4 (24011084)			3										
		33 (23731713)			2										
		37 (22771884)			3										

		32 (22595689)			2										
		17 (15458458)			3										
CT abdomen and pelvis without IV contrast	May approp	Limited	��� 1-10 mSv	●●●● 3- 10 mSv [ped]	5	5	0	0	0	4	9	2	0	0	0
		References		Study	Quality										
		16 (22578224)			3										
		15 (12819916)			2										
MRI abdomen without IV contrast	May approp	Limited	O 0 mSv	O 0 mSv [ped]	4	4	3	2	2	7	2	0	1	0	0
		References		Study	Quality										
		21 (27362585)			3										
		22 (26925411)			4										
		23 (10739798)			4										
MRI abdomen and pelvis without IV contrast	May approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	4	4	2	2	3	5	5	0	0	0	0
MRA abdomen without IV contrast	May approp	Strong	O 0 mSv	O 0 mSv [ped]	4	4	2	2	1	5	6	1	0	0	0
		References		Study	Quality										
		4 (24011084)			3										
		9 (-3132600)			4										
		18 (21542417)			2										
		19 (25539255)			1										
		17 (15458458)			3										
		20 (23550187)			2										
MAG3 renal scan	May approp	Limited	��� 1-10 mSv	9	4	4	2	1	5	7	1	1	0	0	0
		References		Study	Quality										_
		25 (11852301)			4										
CT abdomen without IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	9	3	3	4	3	5	2	2	0	1	0	0

MRU without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	4	3	2	4	1	1	0	0	0
CTA abdomen and pelvis with IV contrast	Usually not appropriate	Limited	���� 10-30 mSv		2	2	8	3	2	4	0	0	0	0	0
		References		Study	y Quality										
		9 (-3132600)			4										
MRI abdomen without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	7	2	1	0	0	0	0	0
		References		Study	y Quality										
		21 (27362585)			3										
		22 (26925411)			4										
		23 (10739798)			4		_				_				
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	5	2	1	0	1	0	0	0
MRA abdomen without and with IV contrast	Usually not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	2	2	8	2	3	2	2	0	0	0	0
		References		Study	y Quality		•								
		4 (24011084)			3										
		9 (-3132600)			4										
		18 (21542417)			2										
		19 (25539255)			1										
		17 (15458458)			3										
		20 (23550187)			2					_					
MRU without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	6	0	4	0	0	0	0	0
Radiography abdomen and pelvis	Usually not appropriate		��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0
DMSA renal scan	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	4	7	4	2	0	0	0	0	0

CT abdomen with IV contrast	Usuall approp	Expert Consensus	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	10	3	3	0	1	0	0	0	0
CT abdomen without and with IV contrast	Usuall approp	Expert Consensus	≎≎≎≎ 10- mSv	-30	����� 10-30 mSv [ped]	1	1	10	2	4	0	1	0	0	0	0
CT abdomen and pelvis with IV contrast	Usuall approp	Limited	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	9	5	3	0	0	0	0	0	0
		References			Study	Quality										
		16 (22578224)				3										
		15 (12819916)				2										
CT abdomen and pelvis without and with IV contrast	Usuall approp	Limited	���� 10- mSv	-30	����� 10-30 mSv [ped]	1	1	10	4	3	0	0	0	0	0	0
		References			Study	Quality										
		16 (22578224)				3										
		15 (12819916)				2		_								
CTU without and with IV contrast	Usuall approp	Expert Consensus	�� �� 10- mSv	-30	����� 10-30 mSv [ped]	1	1	10	5	2	0	0	0	0	0	0
Arteriography kidney	Usuall approp	Expert Consensus	��� 1-1 mSv	0		1	1	12	2	2	0	1	0	0	0	0

Variant 2: Renal failure. Chronic kidney disease (CKD). Initial imaging.

n 1	Appropriateness	COF	A L L DDI	D I DDI	D 41	N. 1.			F	inal '	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
US kidneys retroperitoneal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	2	3	1	1	5	5
		References		Study	Quality										

						1								
		30 (23751145)		3		4								
		43 (20651174)		2										
		6 (25730699)		4										
		8 (26391748)		4		_								
		42 (27796695)		3										
		39 (26610178)		4										
		44 (-3163170)		4										
CT abdomen and pelvis without IV contrast	May be appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv 4 [ped]	4	0	0	1	10	2	2	0	0	0
		References		Study Quali	ty									
		16 (22578224)		3										
		15 (12819916)		2										
MRI abdomen without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped] 4	4	3	2	3	6	2	1	0	0	0
		References		Study Qualit	ty									
		21 (27362585)		3	-									
		22 (26925411)		4										
		9 (-3132600)		4										
MRA abdomen without IV contrast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped] 4	4	1	1	2	7	5	1	0	0	0
		References		Study Quality	***									
				Study Quali	L y									
		9 (-3132600)		Study Quant	Ly									
		9 (-3132600) 18 (21542417)			.y									
		` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `		4	LY	-								
		18 (21542417)		4										
US duplex Doppler kidneys retroperitoneal	May be appropriate	18 (21542417) 19 (25539255)	O 0 mSv	4 2 1	4	1	1	4	5	3	1	0	0	0
US duplex Doppler kidneys retroperitoneal		18 (21542417) 19 (25539255) 39 (26610178)	O 0 mSv	4 2 1 4 O 0 mSv	4	1	1	4	5	3	1	0	0	0

CT abdomen without IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	3	3	5	3	2	2	4	1	0	0	0
MRI abdomen and pelvis without IV contrast	Usuall approj	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	6	0	4	2	4	1	0	0	0
MRA abdomen without and with IV contrast	Usuall approj	Strong	O 0 mSv	O 0 mSv [ped]	3	3	4	2	4	3	4	0	0	0	0
		References		Study	Quality										
		9 (-3132600)			4										
		18 (21542417)	ı		2										
		19 (25539255)	ı		1										
		39 (26610178)			4										
CTA abdomen and pelvis with IV contrast	Usuall approj	Expert Consensus	���� 10-30 mSv	0	2	2	7	2	3	5	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usuall approj	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	2	4	2	1	0	0	0	0
MRU without IV contrast	Usuall approj	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	5	5	1	2	1	1	0	0	0
MAG3 renal scan	Usuall approp	Expert Consensus	&& 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	7	2	5	2	1	0	0	0	0
DMSA renal scan	Usuall approj	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	2	4	1	1	1	0	0	0
CT abdomen with IV contrast	Usuall approp	Expert Consensus	&& 1-10 mSv	���� 3- 10 mSv [ped]	1	1	12	3	2	0	0	0	0	0	0
CT abdomen without and with IV contrast	Usuall approp	Expert Consensus	ଡଡ଼େଡ 10-30 mSv	***	1	1	10	3	3	1	0	0	0	0	0
CT abdomen and pelvis with IV contrast	Usuall approp	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	4	3	0	0	1	0	0	0

CT abdomen and pelvis without and with IV contrast	Usuall approp	Expert Consensus	ଡେଡେଡ 10-3 mSv	\$\$\$\$\$\$ 30 10-30 mSv [ped]	1	1	10	5	2	0	0	0	0	0	0
CTU without and with IV contrast	Usuall approp	Expert Consensus	���� 10-3 mSv	30	1	1	11	3	3	0	0	0	0	0	0
Arteriography kidney	Usuall approp	Limited	��� 1-10 mSv)	1	1	10	3	3	1	0	0	0	0	0
		References		Stud	y Quality										
		38 ()			4										
MRI abdomen without and with IV contrast	Usuall approp	Limited	O 0 mSv	O 0 mSv [ped]	1	1	9	2	4	1	1	0	0	0	0
		References		Stud	y Quality										
		21 (27362585)			3										
		22 (26925411)			4										
		9 (-3132600)			4										
MRU without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	3	4	0	0	1	0	0	0
Radiography abdomen and pelvis	Usuall approp		��� 1-10 mSv	0 0.3- 3 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

Variant 3: Renal failure. Kidney disease of unknown duration. Initial imaging.

	Appropri	ateness	GOT.	4.1.14 DD	, D 1 DD1	D 41	3.5 11			F	inal '	Гаbu	latio	ns		
Procedure	Categ		SOE	Adults RR	L Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
US kidneys retroperitoneal	Usua approp	.*	Strong	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	2	0	1	3	11
			Dafamanaaa		Ctud	. Onolitu		-		-		-				

 References
 Study Quality

 31 (26581096)
 3

	27 (26283754)			4										
	4 (24011084)			3										
	30 (23751145)			3										
	28 (12008814)			4										
	29 (21098348)			3										
	3 ()			4										
	26 (416685)			2										
May be appropriate	Limited	��⊕ 1-10 mSv	���� 3- 10 mSv [ped]	5	5	0	0	0	4	8	2	1	0	0
	References		Study	Quality										
	16 (22578224)			3										
	15 (12819916)			2										
May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	4	7	2	2	2	0
	References		Study	Quality										
	34 (27133237)			2										
	36 (26728776)			2										
	35 (25746587)		G	ood										
				004										
	4 (24011084)			3										
	4 (24011084) 33 (23731713)													
	· · · · · · · · · · · · · · · · · · ·			3										
	33 (23731713)			3 2										
	33 (23731713) 37 (22771884)			3 2 3										
May be appropriate	33 (23731713) 37 (22771884) 32 (22595689)	O 0 mSv		3 2 3 2	4	2	4	2	7	1	0	0	1	0
May be appropriate	33 (23731713) 37 (22771884) 32 (22595689) 17 (15458458)	O 0 mSv	O 0 mSv [ped]	3 2 3 2 3	4	2	4	2	7	1	0	0	1	0
May be appropriate	33 (23731713) 37 (22771884) 32 (22595689) 17 (15458458) Limited	O 0 mSv	O 0 mSv [ped]	3 2 3 2 3 2 3	4	2	4	2	7	1	0	0	1	0
May be appropriate	33 (23731713) 37 (22771884) 32 (22595689) 17 (15458458) Limited References	O 0 mSv	O 0 mSv [ped] Study	3 2 3 2 3 4 Quality	4	2	4	2	7	1	0	0	1	0
	May be appropriate	## A (24011084) ## 30 (23751145) ## 28 (12008814) ## 29 (21098348) ## 3 () ## 26 (416685) ## A Comparison of the c	## A (24011084) ## 30 (23751145) ## 28 (12008814) ## 29 (21098348) ## 3 () ## 26 (416685) ## A (24011084) ## 28 (12008814) ## 29 (21098348) ## 3 () ## 26 (416685) ## A (24011084) ## 28 (12008814) ## 29 (21098348) ## 3 () ## 26 (416685) ## A (24011084) ## 30 (23751145) ## 30	4 (24011084) 30 (23751145) 28 (12008814) 29 (21098348) 3 () 26 (416685) May be appropriate Limited ⊕⊕⊕ 1-10 mSv [ped] 10 mSv [ped]	4 (24011084) 3 30 (23751145) 3 28 (12008814) 4 29 (21098348) 3 3 () 4 26 (416685) 2 May be appropriate Limited \$\partition \partition	A (24011084) 3 30 (23751145) 3 28 (12008814) 4 29 (21098348) 3 3 () 4 26 (416685) 2 2 2 2 2 2 2 2 2	A (24011084) 3 3 3 3 4 4 4 4 4 4	A (24011084) 3 3 3 3 3 4 4 4 4 4	A (24011084) 3 3 3 3 3 3 3 4 4 4	4 (24011084) 3 3 3 3 3 3 3 3 3	A (24011084) 3 3 3 3 3 3 3 3 3	A (24011084) 3 3 3 3 3 3 3 3 3	A (24011084) 3 3 3 3 3 3 3 3 3	4 (24011084) 3 3 3 0 (23751145) 3 28 (12008814) 4 29 (21098348) 3 3 (0 4 4 26 (416685) 2 2 2 2 2 2 2 36 (26728776) 2 3 3 (23751145) 3 3 (23751145) 3 3 (23751145) 3 3 (23751145) 3 3 (23751145)

MRI abdomen and pelvis without IV contrast		May be Strong O 0 mSv		O 0 mSv	O 0 mSv [ped]	4	4	2	4	2	4	4	0	0	1	0
MRA abdomen without IV contrast	May approp		Strong	O 0 mSv	O 0 mSv [ped]	4	4	3	0	4	8	1	0	1	0	0
			References		Study	y Quality										
			4 (24011084)			3										
			19 (25539255)			1										
			17 (15458458)			3										
			20 (23550187)			2										
CT abdomen without IV contrast	Usually approp		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	3	3	4	4	3	2	2	1	1	0	0
MRA abdomen without and with IV contrast	Usually approp		Limited	O 0 mSv	O 0 mSv [ped]	3	3	7	1	2	6	1	0	0	0	0
		References		Study	y Quality											
		4 (24011084)				3										
			9 (-3132600)			4										
			18 (21542417)			2										
			19 (25539255)			1										
			17 (15458458)			3										
			20 (23550187)			2			,							
MRU without IV contrast	Usually approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	4	3	1	3	2	2	0	0	0
MRU without and with IV contrast	Usually approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	4	2	3	0	0	0	0	0
MAG3 renal scan	Usually approp		Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	7	3	4	2	1	0	0	0	0
DMSA renal scan	Usually approp		Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	7	4	2	3	1	0	0	0	0

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CT abdomen with IV contrast	Usuall approp	Expert Consensus	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	11	4	2	0	0	0	0	0	0
CT abdomen without and with IV contrast	Usuall approp	Expert Consensus	���� 10- mSv	30	≎≎≎≎≎ 10-30 mSv [ped]	1	1	10	4	2	0	1	0	0	0	0
CT abdomen and pelvis with IV contrast	Usuall approp	Expert Consensus	��� 1-1 mSv	0	≎≎≎≎ 3- 10 mSv [ped]	1	1	10	5	2	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approp	Limited	���� 10- mSv	30	≎≎≎≎≎ 10-30 mSv [ped]	1	1	9	6	2	0	0	0	0	0	0
		References			Study	Quality										
		16 (22578224)				3										
		15 (12819916)				2										
CTA abdomen and pelvis with IV contrast	Usuall approp	Limited	���� 10- mSv	30		1	1	9	2	3	3	0	0	0	0	0
		References			Study	Quality										
		9 (-3132600)				4										
CTU without and with IV contrast	Usuall approp	Expert Consensus	≎≎≎≎ 10- mSv	30	����� 10-30 mSv [ped]	1	1	10	3	4	0	0	0	0	0	0
Arteriography kidney	Usuall approp	Expert Consensus	��� 1-1 mSv	0		1	1	12	2	3	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	9	2	5	1	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	9	1	4	3	0	0	0	0	0
Radiography abdomen and pelvis	Usuall approp		��� 1-1 mSv	0	��� 0.3- 3 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

Variant 4: Renal failure. Neurogenic bladder. Initial imaging.

D 1	Appropriate	ness	A L L DDI	D I DDI	D (1	3.6.19	Final Tabulations									
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9	
US kidneys retroperitoneal	Usually appropriate	e Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	1	2	2	3	1	8	
		References		Study												
		54 (23073657)														
		56 (29339880)														
		53 (29072046)		4												
		48 (26304502)			4											
		49 (26067125)			4											
		52 (24706504)														
		55 (22177149)														
CT abdomen and pelvis without IV contrast	May be appropriate	e Limited	≎≎≎ 1-10 mSv	⊕⊕⊕⊕ 3- 10 mSv [ped]	5	5	0	0	0	4	8	3	0	0	0	
		References		Study				•	•		•	•	•			
		16 (22578224)		•												
MRI abdomen and pelvis without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	2	2	3	4	4	1	1	0	0	
		References		Study								•				
		50 (26266405)														
DMSA renal scan	May be appropriate	e Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	4	4	1	2	3	7	3	1	0	0	0	
		References		Study						_						
		52 (24706504)		3 2												
		51 (21484032)														

CT abdomen without IV contrast	Usually not appropriate		Limited	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	3	3	4	2	5	4	1	0	1	0	0
			References			Study Quality									•	,	
			16 (22578224)			3											
US duplex Doppler kidneys retroperitoneal	Usually appropr		Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	3	3	4	1	5	2	3	1	0	0	1
Fluoroscopy voiding cystourethrography	Usually appropr		Expert Consensus © 0.1-1mSv		�� 0.03- 0.3 mSv [ped]	2	2	7	6	2	0	0	0	0	0	0	
MRI abdomen without IV contrast	Usually appropr		Expert O 0 mSv		,	O 0 mSv [ped]	2	2	6	3	5	1	1	0	1	0	0
CT abdomen with IV contrast	Usually appropr		Expert Consensus mSv		0	���� 3- 10 mSv [ped]	1	1	10	2	3	1	1	0	0	0	0
CT abdomen without and with IV contrast	Usually appropr		Expert Consensus			����� 10-30 mSv [ped]	1	1	10	4	1	1	1	0	0	0	0
CT abdomen and pelvis with IV contrast	Usually appropr		Expert Consensus	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	1	1	10	4	1	1	1	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually appropr		Expert Consensus	≎≎≎≎ 10- mSv	30	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	1	1	10	4	1	1	1	0	0	0	0
CTA abdomen and pelvis with IV contrast	Usually appropr		Expert Consensus	���� 10- mSv	30		1	1	10	4	0	1	2	0	0	0	0
CTU without and with IV contrast	Usually appropr		Expert Consensus	���� 10- mSv	30	����� 10-30 mSv [ped]	1	1	10	4	1	1	1	0	0	0	0
Fluoroscopy cystography	Usually appropr		Expert Opinion	��� 1-10 mSv	0		1	1	9	4	1	1	0	0	0	0	0

MRI abdomen without and with IV contrast	Usually not appropriate		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	3	2	1	2	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate		Limited	O 0 mSv	O 0 mSv [ped]	1	1	9	3	1	3	1	0	0	0	0
			References	References Study												
			50 (26266405)			4										
MRU without IV contrast	Usually not appropriate		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	1	1	4	1	0	0	0	0
MRU without and with IV contrast	Usually not appropriate		Expert Consensus	O 0 mSv	, O 0 mSv [ped]	1	1	10	2	1	2	2	0	0	0	0
MAG3 renal scan	Usually not appropriate		Expert Consensus	��� 1-10 mSv	0	1	1	9	2	4	2	0	0	0	0	0
Radiography abdomen and pelvis	Usually not appropriate			��� 1-10 mSv	0	1	n/a	0	0	0	0	0	0	0	0	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.