ONLINE SUPPLEMENTAL MATERIAL

Online Table 1. Rater characteristics (first and second readings)

Rater characteristics	1st reading (n=24)	2nd reading (n=20)
Experience		
0-5 yrs	7 (29%)	6 (30%)
6-10 yrs	7 (29%)	6 (30%)
11-20 yrs	6 (25%)	5 (25%)
20+ yrs	4 (17%)	3 (15%)
Background		
Core Lab	2 (8%)	2 (10%)
INR	11 (46%)	9 (45%)
DNR	2 (8%)	2 (10%)
NSX	7 (29%)	6 (30%)
INL	4 (17%)	3 (15%)
Type of practice		
Clipping	4 (17%)	3 (15%)
Coiling	13 (54%)	11 (55%)
Both	2 (8%)	2 (10%)
None*	5 (21%)	4 (20%)

Data displayed as n (%). INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional Neurology. * "None" subgroup refers to diagnostic neuroradiologists and other raters (INR, INL, NSX) who don't perform clipping and/or coiling in their current practice.

Online Table 2. Individual intra-rater agreements for the classification system

Rater (n=20)	Background	Intra-rater Agreement
S1	INR	0.85 (0.76 – 0.93)
S2	INR	0.79 (0.66 – 0.88)
S3	INR	0.77 (0.63 – 0.87)
S4	INR	0.74 (0.58 – 0.89)
S5	NSX	0.77 (0.62 – 0.88)
S6	NSX	0.77 (0.61 – 0.89)
S7	DNR	0.73 (0.57 – 0.85)
S8	INL	0.66 (0.45 – 0.80)
J1	INR	0.79 (0.60 – 0.92)
J2	INR	0.60 (0.39 – 0.80)
J3	INR	0.87 (0.77 – 0.93)
J4	INR	0.79 (0.64 – 0.89)
J5	INR	0.76 (0.59 – 0.91)
J6	NSX	0.84 (0.74 – 0.92)
J7	NSX	0.71 (0.53 – 0.83)
J8	NSX	0.85 (0.75 – 0.93)
J9	NSX	0.82 (0.70 – 0.90)
J10	DNR	0.75 (0.57 – 0.87)
J11	INL	0.70 (0.50 – 0.85)
J12	INL	0.89 (0.77 – 0.96)

Data displayed as Krippendorff's α (α_K) (95% Confidence Interval) for ordinal 3-grade classification system. Classification grades: 1: Complete occlusion; 2: Residual neck (<2mm); 3: Residual aneurysm. INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional Neurology, S: Senior; J: Junior.

Online Table 3. Summarized intra-rater agreement for the classification system

	Intra-rater agreement
Overall (n=20)	0.77 ± 0.07
Experience	
Junior (n=12)	0.78 ± 0.08
Senior n=8)	0.76 ± 0.06
Background	
Core Lab (n=2)	0.82 ± 0.05
INR (n=9)	0.77 ± 0.08
DNR (n=2)	0.74 ± 0.01
NSX (n=6)	0.79 ± 0.06
INL (n=3)	0.75 ± 0.12

Data displayed as mean Krippendorff's α (α_K) ± SD for the grading scale. Classification grades: 1: Complete occlusion; 2: Residual neck (<2mm); 3: Residual aneurysm. INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional Neurology.

Online Table 4. Inter-rater agreement for clinical follow-up management.

	CTA - Surgical (n=30)	MRA - Endovascular (n=30)	Total (n=60)
Overall	0.49 (0.32 – 0.61)	0.47 (0.34 – 0.54)	0.48 (0.39 – 0.55)
Experience			
Junior (0-10 yrs; n=14)	0.49 (0.33 – 0.61)	0.48 (0.36 – 0.56)	0.49 (0.39 – 0.57)
Senior (>10 yrs; n=10)	0.47 (0.29 – 0.61)	0.43 (0.27 – 0.52)	0.45 (0.34 – 0.55)
Background			
Core Lab (n=2)	0.75 (0.55 – 0.88)	0.67 (0.38 – 0.87)	0.73 (0.58 – 0.85)
INR (n=11)	0.46 (0.28 – 0.59)	0.46 (0.33– 0.55)	0.46 (0.35 – 0.54)
DNR (n=2)	0.55 (0.16 – 0.78)	0.33 (-0.11 – 0.63)	0.48 (0.22 – 0.66)
NSX (n=7)	0.48 (0.29 – 0.61)	0.43 (0.25 – 0.55)	0.46 (0.35 – 0.55)
INL (n=4)	0.37 (0.10 – 0.56)	0.55 (0.38 – 0.68)	0.47 (0.32 – 0.59)

Data displayed as Krippendorff's α (α_K) (95% Confidence Interval) for ordinal 3-option clinical management. Clinical management grades: 1: Delayed FU (3-5 years, or none at all); 2: Close FU (6-18 months); 3: Retreatment (endovascular or surgical). INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional neurology.

Online Table 5. Individual intra-rater agreement for the clinical management

Rater (n=20)	Background	Intra-rater Agreement
S1	INR	0.82 (0.69 – 0.91)
S2	INR	0.81 (0.67 – 0.90)
S3	INR	0.41 (0.05 – 0.69)
S4	INR	0.73 (0.54 – 0.90)
S5	NSX	0.59 (0.39 – 0.75)
S6	NSX	0.65 (0.46 – 0.79)
S7	DNR	0.80 (0.64 – 0.91)
S8	INL	0.69 (0.48 – 0.84)
J1	INR	0.72 (0.53 – 0.89)
J2	INR	0.59 (0.36 – 0.79)
J3	INR	0.62 (0.41 – 0.75)
J4	INR	0.75 (0.59 – 0.86)
J5	INR	0.80 (0.65 – 0.91)
J6	NSX	0.62 (0.41 – 0.78)
J7	NSX	0.31 (0.06 – 0.51)
J8	NSX	0.67 (0.49 – 0.83)
J9	NSX	0.72 (0.56 – 0.84)
J10	DNR	0.71 (0.51 – 0.86)
J11	INL	0.73 (0.54 – 0.90)
J12	INL	0.88 (0.78 – 0.96)

Data displayed as Krippendorff's a (aK) (95% Confidence Interval) for ordinal 3-grade clinical management. Clinical management grades: 1: Delayed FU (3-5 years, or none at all); 2: Close FU (6-18 months); 3: Retreatment (either by coiling or clipping). INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional Neurology, S: Senior; J: Junior.

Online Table 6. Summarized intra-rater agreement for the clinical management

	Intra-rater agreement
Overall (n=20)	0.68 ± 0.14
Experience	
Junior (n=12)	0.69 ± 0.14
Senior n=8)	0.68 ± 0.14
Background	
Core Lab (n=2)	0.81 ± 0.00
INR (n=9)	0.70 ± 0.14
DNR (n=2)	0.76 ± 0.06
NSX (n=6)	0.59 ± 0.14
INL (n=3)	0.76 ± 0.10

Data displayed as mean Krippendorff's α (α_K) ± SD for clinical management. Clinical management grades: 1: Delayed FU (3-5 years, or none at all); 2: Close FU (6-18 months); 3: Retreatment (either by coiling or clipping). INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional Neurology.

Online Table 7. Measures of association between grade and management for each rater

Rater	Background	Fisher (p-value)	Cramer's V
1	INR	<0.001	0.79 (0.59 – 0.96)
2	INR	<0.001	0.86 (0.66 – 1.00)
3	INR	<0.001	0.95 (0.76 – 1.00)
4	INR	<0.001	0.94 (0.75 – 1.00)
5	INR	<0.001	NA
6	INR	<0.001	0.83 (0.64 – 1.00)
7	INR	<0.001	NA
8	INR	<0.001	0.95 (0.75 – 1.00)
9	INR	<0.001	0.83 (0.64 – 1.00)
10	INR	<0.001	NA
11	INR	<0.001	0.77 (0.57 – 0.93)
12	NSX	<0.01	0.52 (0.31 – 0.67)
13	NSX	<0.001	0.62 (0.42 – 0.79)
14	NSX	<0.001	0.64 (0.44 – 0.80)
15	NSX	<0.001	0.60 (0.40 – 0.76)
16	NSX	<0.001	0.98 (0.79 – 1.00)
17	NSX	<0.001	0.78 (0.58 – 0.95)
18	NSX	<0.001	0.73 (0.53 – 0.89)
19	DNR	<0.001	0.94 (0.74 – 1.00)
20	DNR	<0.001	0.60 (0.40 – 0.76)
21	INL	<0.001	0.61 (0.40 – 0.77)
22	INL	<0.001	NA
23	INL	<0.001	0.74 (0.54 – 0.91)
24	INL	<0.001	0.81 (0.61 – 0.97)

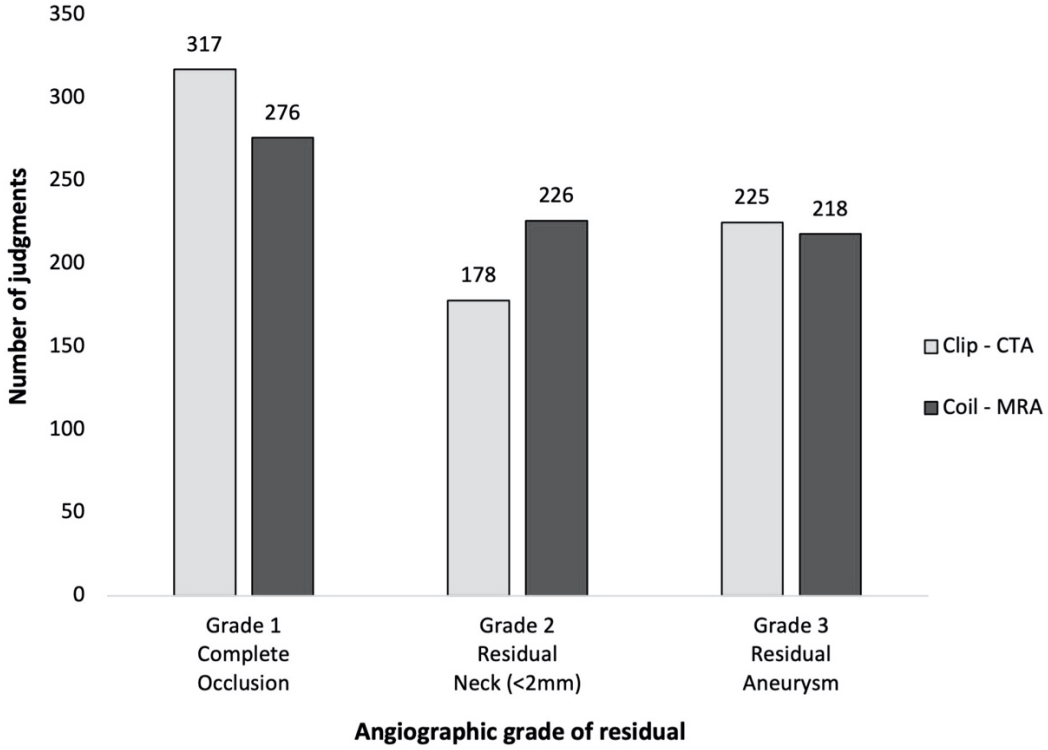
Cramer's V displayed as: V (95% Confidence Interval). NA: value that could not be calculated because of an absent statistical condition (e.g. raters who did not choose the *delayed follow-up* clinical option for any of the 60 cases). INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional Neurology.

Online Table 8. Mean Cramer's V for each rater subgroup

	Mean Cramer's V
Overall (n=20)	0.77 ± 0.14
Experience	
Junior (n=12)	0.81 ± 0.15
Senior n=8)	0.73 ± 0.11
Background	
INR (n=8)	0.87 ± 0.07
DNR (n=2)	0.77 ± 0.24
NSX (n=7)	0.70 ± 0.15
INL (n=3)	0.72 ± 0.10

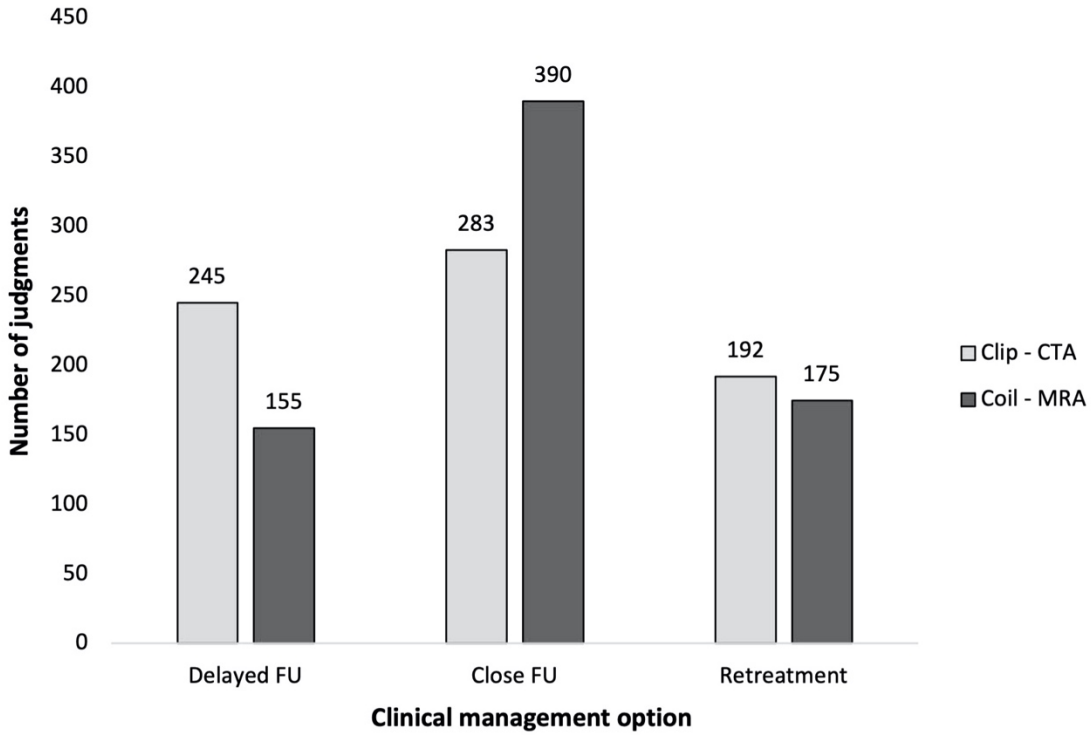
Data displayed as mean Cramer's V ± SD. INR: Interventional neuroradiology; DNR: Diagnostic neuroradiology; NSX: Neurosurgery; INL: Interventional Neurology.

Online Figure 1. Total number of judgments (n=1440) according to treatment modality and angiographic grade.



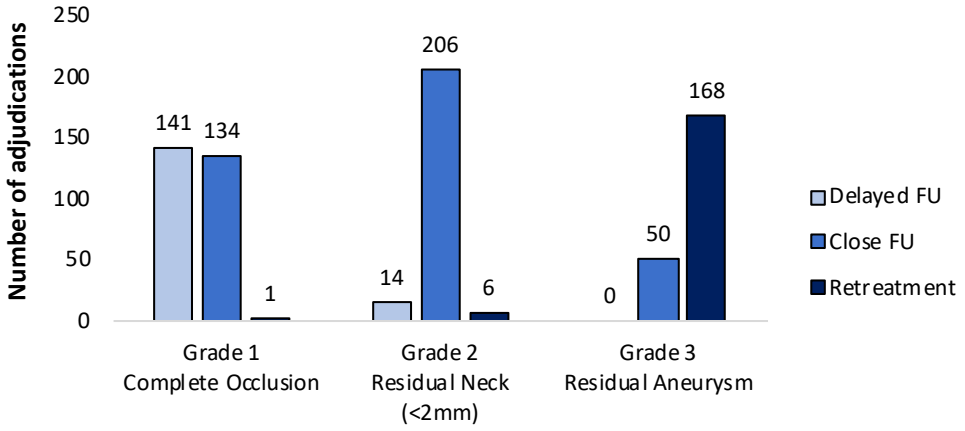
A judgment is defined as a rater's choice of grade and clinical follow-up management for a selected treated aneurysm.

Online Figure 2. Total number of judgments (n=1440) according to treatment modality and clinical follow-up option.



A judgment is defined as a rater's choice of clinical follow-up management for a selected treated aneurysm. FU: Follow-up.

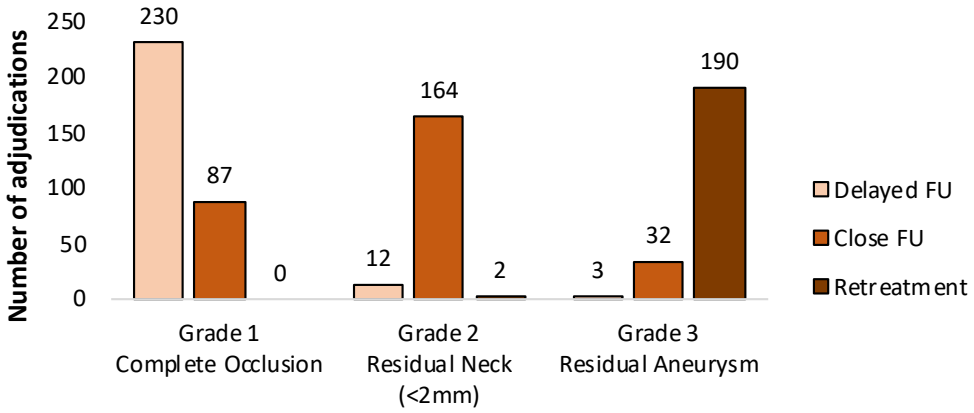
Online Figure 3. Total number of follow-up management choices (n=720) per chosen grade for coiled aneurysms.



Angiographic grade and clinical management of coiled aneurysms

An adjudication is defined as a rater's choice of grade and clinical follow-up management for a selected treated aneurysm. FU: Follow-up.

Online Figure 4. Total number of follow-up management choices (n=720) per chosen grade for clipped aneurysms.



Angiographic grade and clinical management of clipped aneurysms

An adjudication is defined as a rater's choice of grade and clinical follow-up management for a selected treated aneurysm. FU: Follow-up.