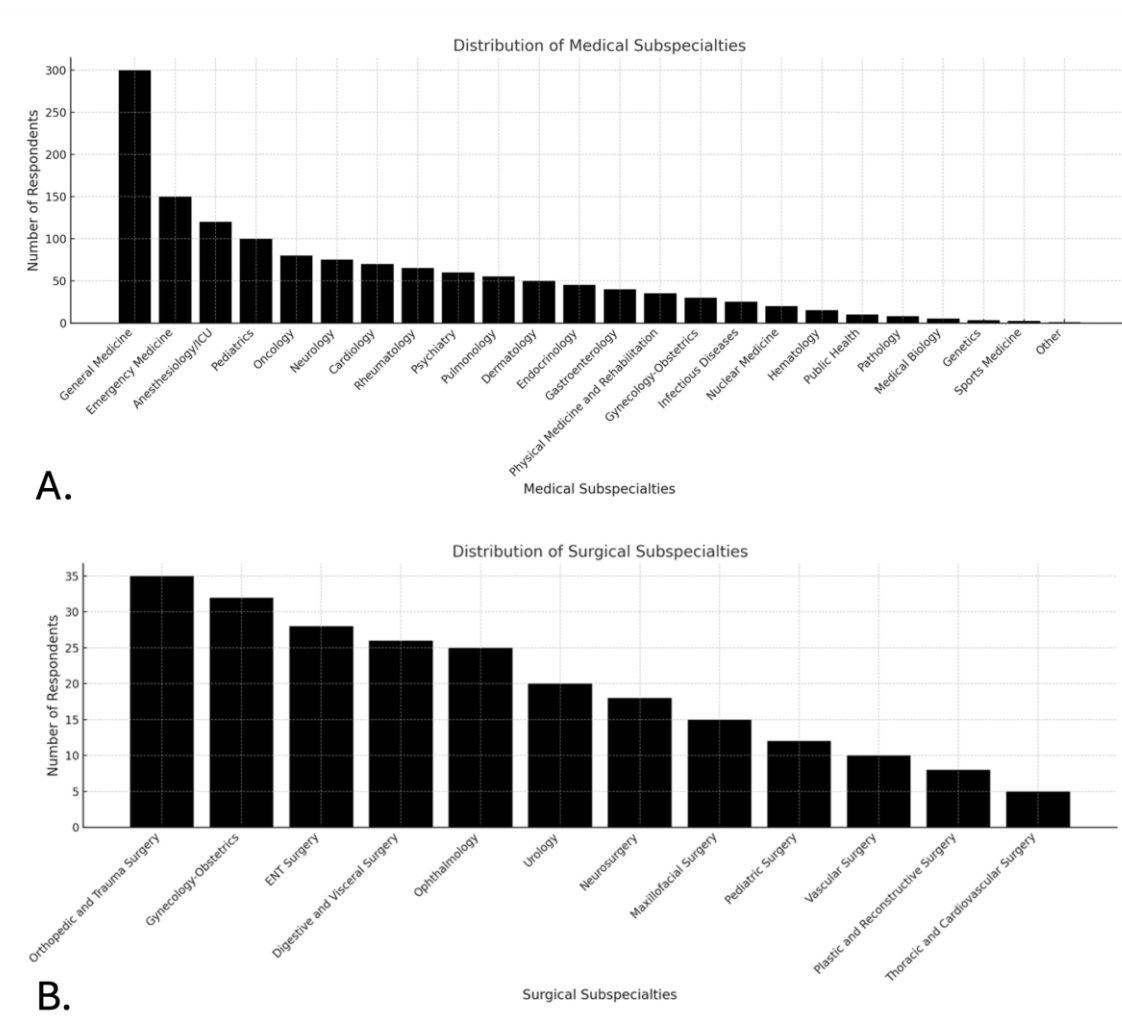


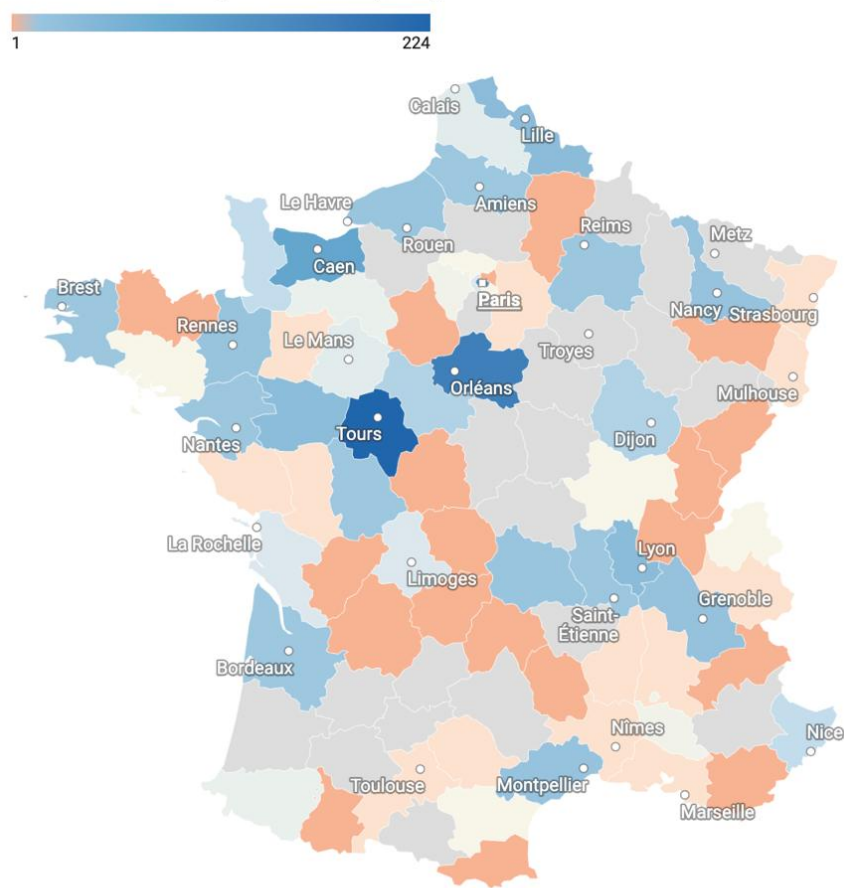
How do non-radiologists physicians read and use the radiology report? A French national survey

ELECTRONIC SUPPLEMENTARY MATERIAL



Supplemental Figure 1. Distribution of Medical (A) and Surgical (B) Subspecialties

Number of Respondents by Department



Supplemental Figure 2. Number of Respondents by Department
(interactive link : <https://datawrapper.dwcdn.net/aC7QT/1/>)

Rating	Study title	Indication	Procedure Type	Findings	Conclusion	Radiologist's Name
0	320 (25.5)	176 (14.1)	536 (42.8)	6 (0.5)	1 (0.1)	143 (11.4)
1	244 (19.5)	232 (18.5)	313 (25.0)	67 (5.4)	33 (2.6)	202 (16.1)
2	144 (11.5)	225 (18.0)	186 (14.8)	136 (10.9)	136 (10.9)	172 (13.7)
3	129 (10.3)	191 (15.2)	127 (10.1)	174 (13.9)	12 (1.0)	244 (19.5)
4	103 (8.2)	168 (13.4)	52 (4.2)	400 (31.9)	53 (4.2)	237 (18.9)
5	313 (25.0)	261 (20.8)	39 (3.1)	470 (37.5)	1018 (81.3)	255 (20.4)

Supplemental Table 1. Importance given to each section of the RR (from 0 (generally not read) to 5/5 (always read)) – Number of respondents and proportions

		AGE CATEGORY				
		20-34 years n=885 (70.6)	35-54 years n=276 (22.1)	>55 years n=92 (7.3)	P value	Effect Size
RADIOLOGY REPORT Reading pattern						
	Integrity	239 (27.0)	79 (28.7)	39 (42.4)	<0.001	0.114
	Results depending on conclusion	307 (34.7)	74 (26.8)	17 (18.5)	-	
	Conclusion only	161 (18.2)	42 (15.1)	15 (16.3)	-	
	Images only	76 (8.6)	33 (12.0)	15 (16.3)	-	
	Situational	102 (11.5)	48 (17.4)	6 (6.5)		
RADIOLOGY REPORT, Importance given for each section (/5)						(Eta²)
	Title	2.10±1.93	2.74±1.91	3.07±1.83	<0.001	0.030
	Indication	2.48±1.71	2.77±1.70	2.97±1.86	<0.001	0.007
	Technique	0.97±1.25	1.66±1.43	1.68±1.50	<0.001	0.063
	Results	3.73±1.23	4.12±1.11	4.08±1.29	<0.001	0.026
	Conclusion	4.47±1.17	4.62±0.92	4.51±1.18	<0.001	<0.001
	Name	2.47±1.67	3.54±1.39	3.67±1.35	<0.001	0.090
KEY IMAGES						
	Notation (/5)	3.63±1.16	3.84±1.22	3.96±1.19	<0.001	0.012
Enhance report quality	Strongly agree	142 (16.0)	46 (16.7)	17 (18.5)	0.344	0.060
	Agree	220 (24.9)	66 (23.9)	21 (22.8)		
	Undecided	287 (32.4)	106 (38.4)	31 (33.7)		
	Disagree	152 (17.2)	29 (10.5)	14 (15.2)		
	Strongly disagree	84 (9.5)	29 (10.5)	9 (9.8)		
Avoid opening the imaging examination	Strongly agree	96 (10.8)	38 (13.8)	11 (12.0)	0.338	0.060
	Agree	185 (20.9)	42 (15.2)	20 (21.7)		
	Undecided	156 (17.6)	49 (17.8)	20 (21.7)		
	Disagree	218 (24.6)	63 (22.8)	17 (18.5)		
	Strongly disagree	230 (26.0)	84 (30.4)	24 (26.1)		
Would like their systematic inclusion in radiology report	Strongly agree	280 (31.6)	93 (33.7)	32 (34.8)	0.099	0.073
	Agree	290 (32.8)	71 (25.7)	27 (29.3)		
	Undecided	218 (24.6)	63 (22.8)	19 (20.7)		
	Disagree	54 (6.1)	26 (9.4)	9 (9.8)		
	Strongly disagree	43 (4.9)	23 (8.3)	5 (5.4)		
Help understanding the radiology report	Strongly agree	318 (35.9)	123 (44.6)	38 (41.3)	0.169	0.068
	Agree	377 (42.6)	99 (35.9)	33 (35.9)		
	Undecided	126 (14.2)	29 (10.5)	14 (15.2)		
	Disagree	34 (3.8)	15 (5.4)	5 (5.4)		
	Strongly disagree	30 (3.4)	10 (3.6)	2 (2.2)		
Reinforce confidence toward the radiologist's conclusion	Strongly agree	259 (29.3)	79 (28.6)	24 (26.1)	0.878	0.039
	Agree	286 (32.3)	86 (31.2)	24 (26.1)		
	Undecided	238 (26.9)	80 (29.0)	30 (32.6)		
	Disagree	64 (7.2)	19 (6.9)	8 (8.7)		
	Strongly disagree	38 (4.3)	12 (4.3)	6 (6.5)		
USE of THE RADIOLOGY REPORT						
Notation of the radiologist's diagnostic hypothesis (/5)		4.03±0.70	3.92±0.75	3.89±0.84	0.082	0.002
Do you follow radiologist's recommendation for additional imaging?	Always	188 (21.2)	61 (22.1)	24 (26.1)	0.004	0.095
	Often	588 (66.4)	171 (62.0)	51 (55.4)		
	Sometimes	101 (11.4)	35 (12.7)	35 (12.7)		
	Rarely	8 (0.9)	6 (2.2)	4 (4.3)		
	Never	0	3 (1.0)	0		
How do you consider the radiologist's medical care recommendation?	It is necessary	86 (9.7)	18 (6.5)	5 (5.4)	0.002	0.112
	It has an additional value	579 (65.4)	170 (61.6)	51 (55.4)		
	Not his/her role	170 (19.2)	76 (27.5)	31 (33.7)		
	Do not follow	50 (5.6)	23 (8.4)	5 (5.4)		
Use of the RR within the medical record	Copy/Paste	551 (62.3)	120 (43.5)	27 (29.3)	<0.001	0.158
	Reformulate	305 (34.4)	134 (48.5)	56 (60.9)		
	Do not consider	29 (3.3)	22 (8.0)	9 (9.8)		
Have you ever made a mistake by not reading the RR?	Yes	67 (7.6)	24 (8.7)	4 (4.4)	0.717	0.029
	No	477 (53.9)	143 (51.8)	52 (56.5)		
	Do not know	341 (38.5)	109 (39.5)	36 (39.1)		
About the preliminary report, do you read it?	Yes, consider it definitive	187 (21.1)	28 (10.1)	8 (8.7)	<0.001	0.211
	Yes, but wait for senior validation	413 (46.7)	157 (56.9)	56 (60.9)		
	Yes, but call if disagree	273 (30.8)	73 (26.4)	17 (18.5)		
	No, wait for senior validation	12 (1.4)	9 (3.3)	6 (6.5)		
	Not concerned	0	9 (3.3)	5 (5.4)		
In a vital emergency, what is your attitude toward the RR	You watch directly images	429 (48.5)	154 (55.8)	43 (46.7)	0.228	0.057
	Do not wait, ask specialist to watch	171 (19.3)	41 (14.9)	20 (21.7)		
	Wait final RR	44 (4.9)	7 (2.5)	4 (4.3)		
	Not concerned	241 (27.2)	74 (26.8)	25 (27.2)		
Do you read the RR post-emergency?	Yes	678 (76.6)	196 (71.0)	67 (72.8)	0.175	0.050
	No	59 (6.7)	30 (10.9)	7 (7.6)		
	Not concerned	148 (16.7)	50 (18.1)	18 (19.6)		

Supplemental Table 2. Responses depending on age category

Bolded *P* values and effect size results indicate an effect size>0.100 (Cramer V, for proportions), or >0.0100 (Eta², for numerical data)

		ACADEMIC STATUS			
		Academic n=745 (59.5)	Non-Academic n=508 (40.5)	P value	Effect Size
RADIOLOGY REPORT Reading pattern					
	Integrity	200 (26.8)	157 (30.9)	<0.001	0.149
	Results depending on conclusion	212 (28.5)	186 (36.6)	-	
	Conclusion	130 (17.4)	88 (17.3)	-	
	Images only	89 (11.9)	35 (6.9)	-	
	Situational	114 (15.3)	42 (8.3)		
RADIOLOGY REPORT, Importance given for each section (/5)					
	Title	2.08±1.93	2.65±1.93	<0.001	0.145
	Indication	2.35±1.71	2.90±1.70	<0.001	0.157
	Technique	1.17±1.34	1.17±1.37	<0.001	0.006
	Results	3.88±1.18	3.80±1.26	<0.001	0.020
	Conclusion	4.50±1.11	4.51±1.14	<0.001	0.028
	Name	2.86±1.60	2.69±1.75	<0.001	0.045
KEY IMAGES					
	Notation (/5)	3.84±1.12	3.49±1.23	<0.001	0.148
Help understanding the radiology report	Strongly agree	317 (42.5)	162 (31.9)	<0.001	0.173
	Agree	310 (41.6)	199 (39.2)		
	Undecided	82 (11.1)	87 (17.1)		
	Disagree	22 (2.9)	32 (6.3)		
	Strongly disagree	14 (1.8)	28 (5.5)		
Enhance report quality	Strongly agree	125 (16.7)	80 (15.0)	<0.001	0.093
	Agree	196 (26.3)	111 (21.9)		
	Undecided	258 (34.6)	166 (32.7)		
	Disagree	107 (14.3)	88 (17.3)		
	Strongly disagree	59 (7.9)	63 (12.4)		
Avoid opening the imaging examination	Strongly agree	68 (9.1)	77 (15.2)	<0.001	0.168
	Agree	119 (15.9)	128 (25.2)		
	Undecided	136 (18.2)	89 (17.5)		
	Disagree	198 (26.5)	100 (19.7)		
	Strongly disagree	224 (30.1)	114 (22.4)		
Would like their systematic inclusion in radiology report	Strongly agree	243 (32.6)	162 (31.8)	<0.001	0.069
	Agree	229 (30.7)	159 (31.3)		
	Undecided	184 (24.7)	116 (22.8)		
	Disagree	56 (7.5)	33 (6.5)		
	Strongly disagree	33 (4.4)	38 (7.4)		
Reinforce confidence toward the radiologist's conclusion	Strongly agree.	237 (31.8)	125 (24.6)	<0.001	0.139
	Agree.	237 (31.8)	159 (31.3)		
	Undecided	207 (27.7)	141 (27.7)		
	Disagree	45 (6.1)	46 (9.1)		
	Strongly disagree	19 (2.5)	37 (7.2)		
USE of THE RADIOLOGY REPORT					
Notation of the radiologist's diagnostic hypothesis (/5)		3.93±0.70	4.08±0.75	<0.001	0.206
Do you follow radiologist's recommendation for additional imaging?	Always	135 (18.1)	138 (27.1)	<0.001	0.132
	Often	514 (68.9)	296 (58.2)		
	Sometimes	87 (11.6)	62 (12.2)		
	Rarely	9 (1.7)	9 (1.7)		
	Never	0	3 (0.5)		
How do you consider the radiologist's medical care recommendation?	It is necessary	15 (2.1)	26 (5.1)	<0.001	0.152
	It has an additional value	473 (63.4)	327 (64.3)		
	Not his/her role	132 (17.7)	73 (14.3)		
	Do not follow	34 (4.5)	14 (2.7)		
Use of the RR within the medical record	Copy/Paste	414 (55.5)	284 (55.9)	<0.001	0.018
	Reformulate	293 (39.3)	202 (39.7)		
	Do not consider	38 (5.1)	22 (4.3)		
Have you ever made a mistake by not reading the RR?	Yes	60 (8.1)	35 (6.9)	0.598	0.029
	No	403 (54.1)	269 (53.0)		
	Do not know	282 (37.9)	204 (40.2)		
About the preliminary report, do you read it?	Yes, consider it definitive	79 (10.6)	82 (16.1)	<0.001	0.241
	Yes, but wait for senior validation	276 (37.1)	238 (46.8)		
	Yes, but call if disagree	165 (22.1)	80 (15.7)		
	No, wait for senior validation	9 (1.2)	18 (3.5)		
	Not concerned	1 (0.1)	13 (2.5)		
In a vital emergency, what is your attitude toward the RR	You watch directly images	426 (57.1)	200 (39.4)	<0.001	0.217
	Do not wait, ask specialist to watch	145 (19.4)	87 (17.1)		
	Wait final RR	26 (3.4)	29 (5.7)		
	Not concerned	148 (19.8)	192 (37.8)		
Do you read the RR post-emergency?	Yes	586 (78.6)	31 (6.1)	<0.001	0.151
	No	65 (8.7)	355 (69.9)		
	Not concerned	94 (12.6)	122 (24.0)		

Supplemental Table 3. Responses depending on academic status (Academic versus Non-Academic)

Bolded *P* values and effect size results indicate an effect size>0.100

Supplemental Tables 4. Detailed results for medical specialities, summary for specialities above 30 respondents

Question : About CT and MRI radiology reports, **do you read?**

Reading strategy	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
Integrity	321 (30.2%)	93 (30.4%)	20 (20.2%)	28 (32.9%)	25 (35.7%)	17 (24.6%)	11 (26.2%)	11 (33.3%)	6 (20%)
Results *	363 (34.1%)	143 (46.7%)	32 (32.3%)	19 (22.4%)	25 (35.7%)	24 (34.8%)	6 (14.3%)	11 (33.3%)	7 (23.3%)
Conclusion	189 (17.8%)	57 (18.6%)	24 (24.2%)	19 (22.4%)	15 (21.4%)	13 (18.8%)	6 (14.3%)	7 (21.2%)	2 (6.7%)
Images only	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Situational	131 (12.3%)	9 (2.9%)	16 (16.2%)	15 (17.6%)	4 (5.7%)	8 (11.6%)	14 (33.3%)	2 (6.1%)	11 (36.7%)

*The main body of the report ("Results", depending on the conclusion)

Question: How important do you consider the **different sections of the report?**

0-5 score: from 0: if you generally do not read to 5: if you always read

Results score	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
0	3 (0.3%)	1 (0.3%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)
1	54 (5.1%)	25 (8.2%)	5 (5.1%)	1 (1.2%)	3 (4.3%)	0 (0%)	0 (0%)	2 (6.1%)	1 (3.3%)
2	111 (10.4%)	27 (8.8%)	15 (15.2%)	11 (12.9%)	8 (11.4%)	3 (4.3%)	3 (7.1%)	5 (15.2%)	7 (23.3%)
3	146 (13.7%)	51 (16.7%)	12 (12.1%)	6 (7.1%)	7 (10%)	7 (10.1%)	7 (16.7%)	2 (6.1%)	5 (16.7%)
4	346 (32.5%)	108 (35.3%)	35 (35.4%)	25 (29.4%)	17 (24.3%)	28 (40.6%)	18 (42.9%)	13 (39.4%)	11 (36.7%)
5	404 (38%)	94 (30.7%)	32 (32.3%)	42 (49.4%)	35 (50%)	31 (44.9%)	14 (33.3%)	10 (30.3%)	6 (20%)

Conclusion score	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
1	26 (2.4%)	6 (2%)	3 (3%)	2 (2.4%)	2 (2.9%)	0 (0%)	0 (0%)	0 (0%)	2 (6.7%)
2	117 (11%)	37 (12.1%)	16 (16.2%)	9 (10.6%)	9 (12.9%)	1 (1.4%)	2 (4.8%)	5 (15.2%)	5 (16.7%)
3	5 (0.5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
4	29 (2.7%)	3 (1%)	1 (1%)	1 (1.2%)	0 (0%)	3 (4.3%)	2 (4.8%)	1 (3%)	4 (13.3%)
5	887 (83.4%)	260 (85%)	79 (79.8%)	73 (85.9%)	59 (84.3%)	65 (94.2%)	38 (90.5%)	27 (81.8%)	19 (63.3%)

Name score	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
0	129 (12.1%)	62 (20.3%)	13 (13.1%)	5 (5.9%)	6 (8.6%)	2 (2.9%)	1 (2.4%)	2 (6.1%)	3 (10%)
1	183 (17.2%)	79 (25.8%)	13 (13.1%)	10 (11.8%)	10 (14.3%)	8 (11.6%)	4 (9.5%)	4 (12.1%)	3 (10%)
2	151 (14.2%)	42 (13.7%)	19 (19.2%)	11 (12.9%)	6 (8.6%)	13 (18.8%)	2 (4.8%)	6 (18.2%)	4 (13.3%)
3	212 (19.9%)	51 (16.7%)	20 (20.2%)	23 (27.1%)	17 (24.3%)	19 (27.5%)	12 (28.6%)	7 (21.2%)	8 (26.7%)
4	199 (18.7%)	32 (10.5%)	16 (16.2%)	21 (24.7%)	14 (20%)	18 (26.1%)	10 (23.8%)	4 (12.1%)	5 (16.7%)
5	190 (17.9%)	40 (13.1%)	18 (18.2%)	15 (17.6%)	17 (24.3%)	9 (13%)	13 (31%)	10 (30.3%)	7 (23.3%)

Question: Once the radiology report is obtained, **how do you use it in your medical observation?**

Observation	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
Copy/paste	633 (59.5%)	190 (62.1%)	88 (88.9%)	53 (62.4%)	41 (58.6%)	24 (34.8%)	20 (47.6%)	18 (54.5%)	14 (46.7%)
Reformulate	409 (38.4%)	115 (37.6%)	10 (10.1%)	31 (36.5%)	29 (41.4%)	40 (58%)	19 (45.2%)	14 (42.4%)	12 (40%)
Do not take into account	22 (2.1%)	1 (0.3%)	1 (1%)	1 (1.2%)	0 (0%)	5 (7.2%)	3 (7.1%)	1 (3%)	4 (13.3%)

Question: When a resident publishes a **preliminary report**, do you read it?

Preliminary report	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
Yes, but wait for senior validation	449 (45.6%)	143 (50.7%)	20 (23.8%)	30 (37%)	36 (52.9%)	31 (50%)	19 (45.2%)	21 (70%)	12 (41.4%)
Yes, but call if disagree	184 (18.7%)	41 (14.5%)	24 (28.6%)	21 (25.9%)	7 (10.3%)	16 (25.8%)	11 (26.2%)	5 (16.7%)	4 (13.8%)
Yes, definitive	146 (14.8%)	68 (24.1%)	22 (26.2%)	5 (6.2%)	1 (1.5%)	6 (9.7%)	3 (7.1%)	1 (3.3%)	3 (10.3%)
if disagree; Yes, but wait for sen	206 (20.9%)	30 (10.6%)	18 (21.4%)	25 (30.9%)	24 (35.3%)	9 (14.5%)	9 (21.4%)	3 (10%)	10 (34.5%)

Questions: How important do you **consider key images?** 0 to 5 score: From 0: not important to 5: very important

What is your level of confidence in the **radiologist's diagnostic hypotheses?** (1 to 5 score)

	Medical group	General medicine	Emergency medicine	Anesthesiology	Pediatrics	Oncology	Neurology	Cardiology	Rheumatology
Key Images' importance	3.71 ± 1.17	3.31 ± 1.19	3.79 ± 1.07	3.79 ± 1.1	4.2 ± 0.81	3.97 ± 1.2	4.1 ± 0.88	3.12 ± 1.41	3.6 ± 1.25
Radiologist's hypothesis	4.06 ± 0.68	4.22 ± 0.6	4.16 ± 0.68	3.94 ± 0.79	4.23 ± 0.57	3.97 ± 0.75	3.93 ± 0.71	3.76 ± 0.75	3.67 ± 0.84

Question: Have you ever made a medical mistake due to not thoroughly reading the radiology report?

Mistake	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
Do not know	415 (39%)	134 (43.8%)	31 (31.3%)	30 (35.3%)	20 (28.6%)	23 (33.3%)	15 (35.7%)	9 (27.3%)	11 (36.7%)
No	568 (53.4%)	158 (51.6%)	59 (59.6%)	47 (55.3%)	49 (70%)	36 (52.2%)	25 (59.5%)	22 (66.7%)	17 (56.7%)
Yes	81 (7.6%)	14 (4.6%)	9 (9.1%)	8 (9.4%)	1 (1.4%)	10 (14.5%)	2 (4.8%)	2 (6.1%)	2 (6.7%)

Question : Do you usually follow the radiologist's recommendations regarding additional imaging proposals?

Complementary imaging	Medical group n=1064 (85%)	General med. n=306 (28.8%)	Emergency med. n=99 (9.3%)	Anesthesiol. n=85 (8%)	Pediatrics n=70 (6.6%)	Oncology n=69 (6.5%)	Neurology n=42 (3.9%)	Cardiology n=33 (3.1%)	Rheumatology n=30 (2.8%)
Always	256 (24.1%)	88 (28.8%)	23 (23.2%)	18 (21.2%)	18 (25.7%)	13 (18.8%)	9 (21.4%)	5 (15.2%)	6 (20%)
Often	686 (64.5%)	191 (62.4%)	68 (68.7%)	53 (62.4%)	49 (70%)	40 (58%)	30 (71.4%)	23 (69.7%)	19 (63.3%)
Sometimes	113 (10.6%)	26 (8.5%)	7 (7.1%)	14 (16.5%)	3 (4.3%)	13 (18.8%)	3 (7.1%)	5 (15.2%)	3 (10%)
Rarely	9 (0.8%)	1 (0.3%)	1 (1%)	0 (0%)	0 (0%)	3 (4.3%)	0 (0%)	0 (0%)	2 (6.7%)

Statistical analysis for differences between main medical subspecialties demonstrated a statistically significant difference for each parameter, with a P value <0.001 , except for Conclusion-rating with P value <0.05 . Fischer test was performed for categorical variables, and Kruskal-Wallis test for ordinal score variables.