

Supplementary 2.

To generate new data M'_{ik} for the i -th radiologist measurement of the k -th case representing each case, we used the following formula with a function of a scaling factor d on a percent scale:

$$M'_{ik} = \overline{M}_k + (1 + d/100)(M_{ik} - \overline{M}_k).$$

Here, M_{ik} is the observed reading of the i -th radiologist i for the k -th case, and \overline{M}_k is the median of measurements for the k -th case over all 13 radiologists. Specifically, we adjusted the inter-observer variability by assigning different values of the factor d to the deviation $M_{ik} - \overline{M}_k$ for each radiologist. We assigned $d = 40, 0,$ and -40 so that the generated new M'_{ik} measurement data represent those with increased, observed, and decreased inter-observer variability, respectively; the deviation of each radiologist-level measurement from the case-specific mean was increased, unchanged, or decreased by $d\%$.

Case with Increased Inter-observer Variability													
Set	Radiologist												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	5.14	4.20	3.52	3.71	4.46	4.06	4.65	4.19	4.62	4.23	4.46	5.45	4.79
2	2.87	2.47	2.79	2.91	2.23	2.14	2.52	3.07	2.80	3.15	2.35	2.68	2.55
3	2.23	1.84	1.98	1.91	1.88	1.64	1.67	2.38	2.38	2.12	1.70	1.98	1.74
4	6.86	5.36	6.14	6.51	6.51	4.97	4.90	5.63	6.06	6.73	6.66	6.58	5.75
5	3.14	2.27	2.12	2.57	2.86	2.46	2.32	3.30	2.86	3.07	2.57	3.37	2.68
6	3.46	3.44	4.13	3.62	3.40	3.34	4.10	3.61	3.06	3.36	3.99	3.18	3.61
7	4.40	3.95	4.63	4.01	3.79	3.86	4.63	4.18	3.91	4.21	4.64	3.81	4.28
8	2.03	2.48	2.06	1.88	2.03	1.56	1.89	1.92	1.56	2.00	2.07	2.00	2.07
9	4.15	4.29	4.96	5.19	4.15	4.01	4.22	4.36	3.61	5.47	4.57	4.26	4.59
10	1.70	1.47	1.12	1.46	1.35	1.60	1.60	1.50	1.56	1.68	1.50	1.58	1.68

Case with Observed Inter-observer Variability													
Set	Radiologist												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	4.95	4.28	3.79	3.93	4.46	4.18	4.60	4.27	4.58	4.30	4.46	5.17	4.70
2	2.82	2.53	2.76	2.85	2.36	2.30	2.57	2.96	2.77	3.02	2.45	2.68	2.59
3	2.14	1.86	1.96	1.91	1.89	1.72	1.74	2.25	2.25	2.06	1.76	1.96	1.79
4	6.65	5.58	6.14	6.40	6.40	5.30	5.25	5.77	6.08	6.56	6.51	6.45	5.86
5	3.01	2.39	2.28	2.60	2.81	2.52	2.42	3.12	2.81	2.96	2.60	3.17	2.68
6	3.46	3.45	3.94	3.58	3.42	3.38	3.92	3.57	3.18	3.39	3.84	3.26	3.57
7	4.34	4.02	4.50	4.06	3.90	3.95	4.50	4.18	3.99	4.20	4.51	3.92	4.25
8	2.02	2.34	2.04	1.91	2.02	1.68	1.92	1.94	1.68	2.00	2.05	2.00	2.05
9	4.19	4.29	4.77	4.93	4.19	4.09	4.24	4.34	3.80	5.13	4.49	4.27	4.50
10	1.66	1.50	1.25	1.49	1.41	1.59	1.59	1.52	1.56	1.65	1.52	1.58	1.65

Case with Decreased Inter-observer Variability													
Set	Radiologist												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	4.75	4.35	4.05	4.14	4.46	4.29	4.54	4.34	4.53	4.36	4.46	4.88	4.60
2	2.76	2.59	2.72	2.78	2.48	2.45	2.61	2.84	2.73	2.88	2.54	2.68	2.62
3	2.04	1.88	1.94	1.91	1.89	1.79	1.80	2.11	2.11	2.00	1.82	1.94	1.83
4	6.45	5.81	6.14	6.30	6.30	5.64	5.61	5.92	6.11	6.40	6.37	6.33	5.98
5	2.88	2.51	2.44	2.63	2.76	2.58	2.52	2.94	2.76	2.85	2.63	2.97	2.68
6	3.46	3.45	3.74	3.53	3.43	3.41	3.73	3.52	3.29	3.41	3.68	3.34	3.52
7	4.27	4.08	4.37	4.11	4.01	4.04	4.37	4.18	4.06	4.19	4.38	4.02	4.22
8	2.02	2.21	2.03	1.95	2.02	1.81	1.96	1.97	1.81	2.00	2.03	2.00	2.03
9	4.23	4.29	4.58	4.68	4.23	4.17	4.26	4.32	4.00	4.80	4.41	4.28	4.42
10	1.62	1.52	1.37	1.51	1.47	1.57	1.57	1.53	1.56	1.61	1.53	1.57	1.61