par	group variable	count	median	mean	std	min	max
DLP_dw	Abdomen	13082	1497	1752	1103	2	8134
	Chest	40969	512	981	1032	1	6316
	Head	24017	984	1336	1155	1	10263
	Neck	2216	1051	1157	539	10	4352
	Pelvis	197	1250	1401	569	492	3910
Sum		**80481**					
DLP_dms	Abdomen	13082	1497	1752	1103	2	8134
	Chest	40969	512	981	1032	1	6316
	Head	24017	984	1336	1155	1	10263
	Neck	2216	1051	1157	539	10	4352
	Pelvis	197	1250	1401	569	492	3910
Sum		**80481**					

Table S1. Statistical summary of DLP according to DMS and DW™ systems, and grouped by anatomical region. The unit of DLP is mGy·cm.

DLP: dose-length product, DMS: dose monitoring system; DW™: DoseWatch™

	group variable	count	median	mean	std	min	max
SSDE dw	Abdomen	19031	9.7	10.66	10.99	0	115.84
	Chest	54858	9.88	10.30	10.55	0	166.17
	Head	17458	30.82	23.29	17.82	0	107.9
	Neck	1810	26.09	26.60	21.49	0	121.56
	Pelvis	102	27.29	21.10	18.41	0.20	61.94
Sum		**93259**					
SSDE dms	Abdomen	19031	13.33	15.60	9.87	0.03	142.43
	Chest	54858	12.06	13.86	9.73	0.02	166.17
	Head	17458	31.88	33.74	11.76	0.04	137.31
	Neck	1810	28.68	34.40	17.01	0.07	142.88
	Pelvis	102	33.74	33.30	10.15	0.20	61.94
Sum		**93259**					

Table S2. Statistical summary of SSDE, grouped by anatomical region and the DMS and the DW™ systems. The unit is mGy.

par	group variable	count	median	mean	std	min	max
ED_dw	Abdomen	14541	21.01	25.13	17.18	0.92	124.46
	Chest	40810	7.54	14.23	14.93	0.19	92.03
	Head	22051	1.72	1.89	0.93	0	14.56
	Neck	1378	4.74	5.94	3.09	0	49.55
	Pelvis	603	9.09	11.16	8.08	0.38	50.33

Sum		79383					
ED_{DMSdms}	Abdomen	14541	20.11	24.03	16.55	0	122.74
	Chest	40810	6.69	13.87	15.34	0	103.51
	Head	22051	1.91	2.22	1.85	0	64.49
	Neck	1378	5.01	6.23	3.43	0	57.47
	Pelvis	603	10.4	12.46	8.81	0	56.46
Sum		79383					
SED_{DMS}	Abdomen	14541	20.36	21.82	13.46	0.0	99.93
	Chest	40810	6.36	12.80	13.59	0	86.24
	Head	22051	1.85	2.13	1.68	0	54.16
	Neck	1378	4.74	5.94	3.09	0	49.55
	Pelvis	603	9.45	11.54	7.51	0	47.03
Sum		79383					

Table S3. The table of statistical results of ED data is grouped by the DMS and the DW™ systems, as well as the anatomical region. The unit is mSv.

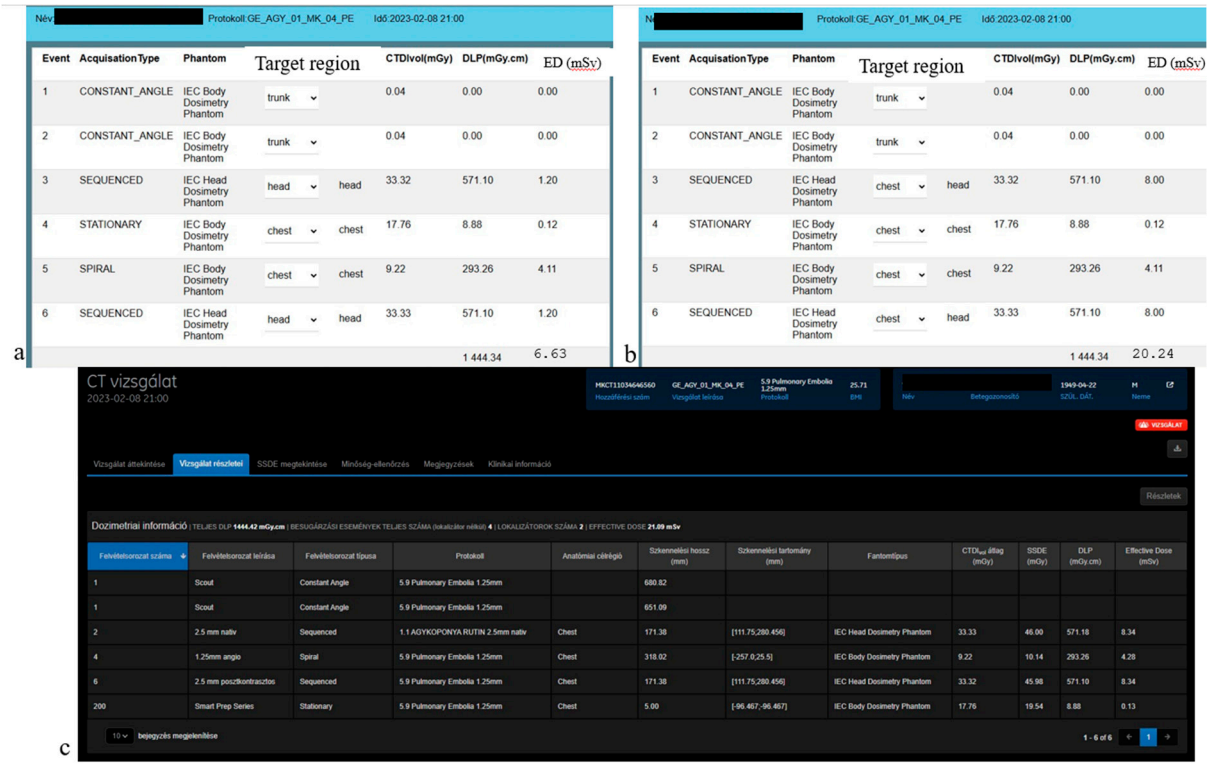


Figure S1. Representative figure of dose monitoring systems. Panels *a* and *b* present the dose report generated by the DMS of a representative study, which includes target regions and dose metrics (CTDI, DLP, ED) for each series. The DMS automatically populates the target region and remains manually editable. Panel c displays the dose report of the same study by the DW™, which provides similar data; however, the target region is fixed—non-editable—and remains the same across all series. "Panel *a*" displays the correct series-specific target regions corresponding to the actual examinations, whereas "Panel *b*" shows the target regions changed according to the DW™ system identified. The total (the study-related) effective doses are as follows: ED_{DMS}: 6.63 mSv (Panel a),

ED_{DMS}: 20.24 mSv (Panel b), and ED_{DW}: 21.09 mSv (Panel c). The discrete difference between the total doses (20.24 vs. 21.09) is explained by the distinct f factors used in DW™ and DMS.

CTDI: CT dose index; DLP: dose-length product; ED: effective dose; DMS: dose monitoring system; DW™: DoseWatch™

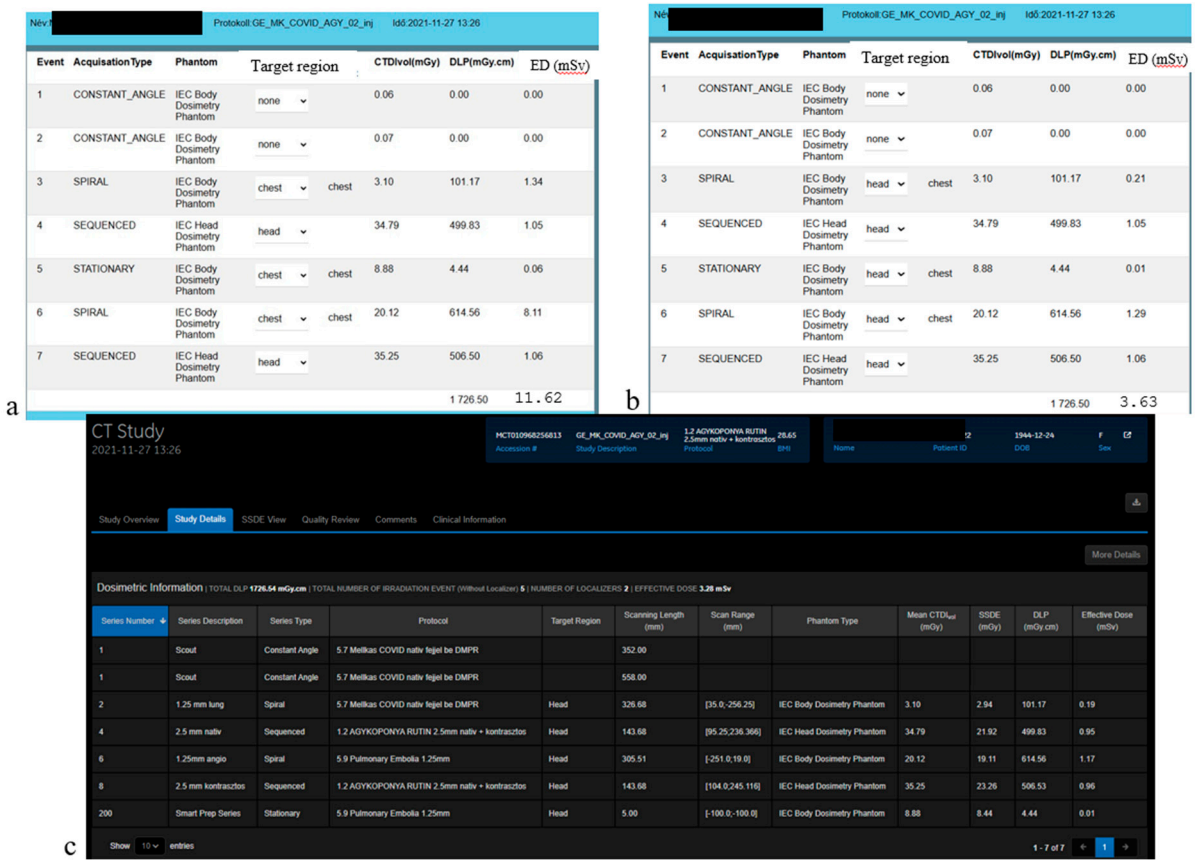


Figure S2. Representative figure of dose monitoring systems. Panels *a* and *b* present the dose report generated by the DMS of a representative study, which includes target regions and dose metrics (CTDI, DLP, ED) for each series. The DMS automatically populates the target region and remains manually editable. Panel c displays the dose report of the same study by the DW™, which provides similar data; however, the target region is fixed—non-editable—and remains consistent across all series. "Panel *a*" displays the correct series-specific target regions corresponding to the actual examinations, whereas "Panel *b*" shows the target regions changed according to the DW™ system identified. The total (the study-related) effective doses are as follows: ED_{DMS}: 11.62 mSv (Panel a), ED_{DMS}: 3.63 mSv (Panel b), and ED_{DW}: 3.28 mSv (Panel c).

CTDI: CT dose index; DLP: dose-length product; ED: effective dose; DMS: dose monitoring system; DW™: DoseWatch™

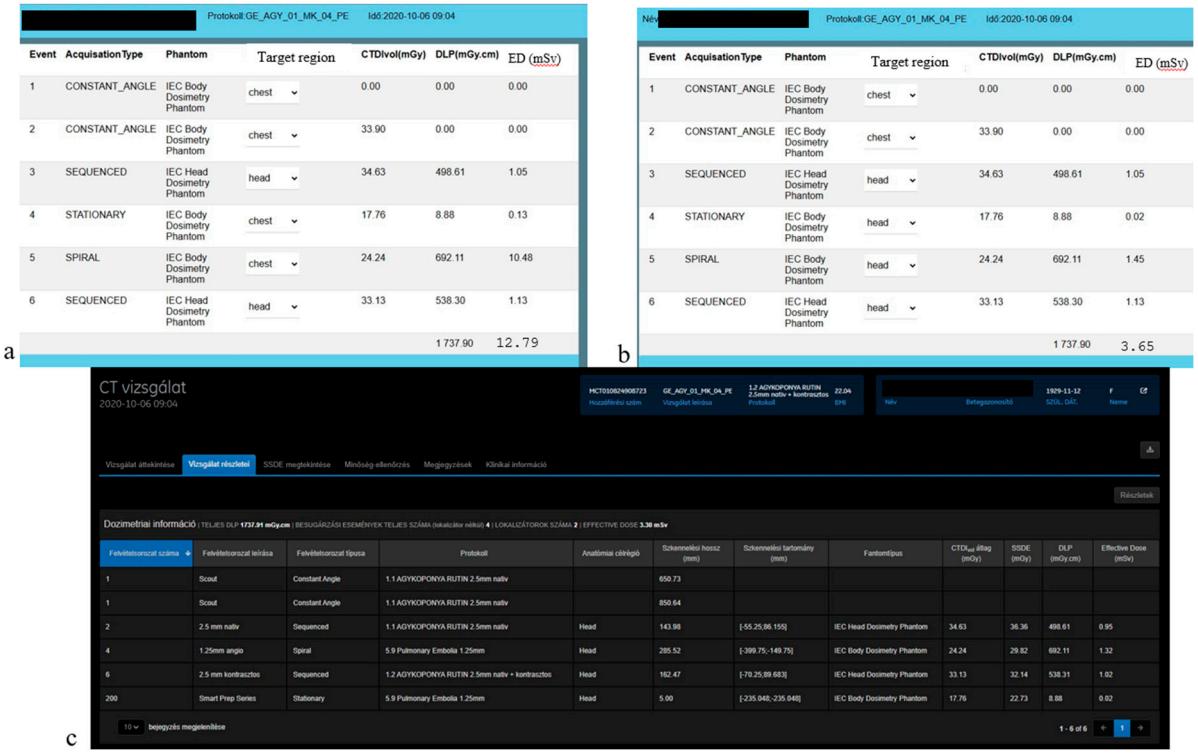


Figure S3. Representative figure of dose monitoring systems. Panels *a* and *b* present the dose report generated by the DMS of a representative study, which includes target regions and dose metrics (CTDI, DLP, ED) for each series. The DMS automatically populates the target region and remains manually editable. Panel c displays the dose report of the same study by the DW™, which provides similar data; however, the target region is fixed—non-editable—and remains consistent across all series. "Panel *a*" displays the correct series-specific target regions corresponding to the actual examinations, whereas "Panel *b*" shows the target regions changed according to the DW™ system identified. The total (the study-related) effective doses are as follows: ED_{DMS}: 12.79 mSv (Panel a), ED_{DMS}: 3.65 mSv (Panel b), and ED_{DW}: 3.30 mSv (Panel c).

CTDI: CT dose index; DLP: dose-length product; ED: effective dose; DMS: dose monitoring system; DW™: DoseWatch™