

# 5 fold Cross Validation

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highest_acc(12 epoch)									
전체	크기	F1	Recall	Precision	SPEC	ACC	IoU	JACCARD	Balanced
86	1.602	52.224	41.538	70.313	99.913	99.623	35.340	35.340	70.726
399	1.625	57.642	51.684	65.154	99.817	99.501	40.491	40.491	75.751
415	1.730	68.872	53.132	97.863	99.995	99.789	52.523	52.523	76.584
395	2.449	48.073	66.903	37.515	99.034	98.758	31.643	31.643	82.969
321	2.752	85.180	78.043	93.755	99.925	99.613	74.186	74.186	88.984
37	2.885	69.793	67.024	72.802	99.565	99.009	53.602	53.602	83.294
Average		63.631	59.721	72.900	99.708	99.382	47.964	47.964	79.714
Standard		12.502	12.105	19.903	0.331	0.370	14.270	14.270	5.997
341	3.464	77.562	85.348	71.078	99.111	98.767	63.348	63.348	92.229
380	3.671	38.437	58.047	28.731	94.342	92.969	23.791	23.791	76.194
64	4.362	91.458	90.494	92.443	99.692	99.325	84.261	84.261	95.093
318	4.552	78.465	71.409	87.069	99.742	99.070	64.562	64.562	85.576
408	4.555	91.734	94.028	89.549	99.583	99.380	84.730	84.730	96.805
412	4.849	86.361	86.498	86.225	99.259	98.609	75.996	75.996	92.878
10	4.862	45.449	39.617	53.295	99.057	97.484	29.407	29.407	69.337
151	4.980	90.458	94.722	86.561	99.076	98.818	82.578	82.578	96.899
Average		74.991	77.520	74.369	98.733	98.053	63.584	63.584	88.126
Standard		19.836	18.479	21.052	1.680	1.999	22.754	22.754	9.632
279	5.212	65.688	79.527	55.952	96.948	96.138	48.907	48.907	88.237
405	5.732	75.427	86.237	67.026	97.828	97.264	60.549	60.549	92.033
237	5.932	86.533	78.407	96.538	99.769	98.148	76.263	76.263	89.088
264	6.578	86.311	95.751	78.565	97.540	97.386	75.918	75.918	96.645
99	6.823	79.596	68.058	95.845	99.714	96.915	66.108	66.108	83.886
18	7.370	72.928	59.025	95.398	99.575	94.305	57.391	57.391	79.300
109	7.801	89.955	86.515	93.680	99.185	97.632	81.744	81.744	92.850
73	7.822	88.794	88.785	88.802	98.751	97.751	79.846	79.846	93.768
190	8.208	79.342	75.424	83.689	97.913	95.118	65.758	65.758	86.669
5	8.224	58.334	64.053	53.553	95.548	93.211	41.178	41.178	79.800
11	8.375	66.999	50.782	98.436	99.888	93.919	50.375	50.375	75.335
25	8.389	74.545	64.286	88.701	99.155	95.893	59.420	59.420	81.720
393	8.431	83.316	93.706	75.001	96.772	95.525	71.404	71.404	94.739
257	8.489	91.903	89.068	94.925	99.197	97.734	85.019	85.019	94.132
163	9.319	79.273	69.880	91.583	99.188	95.897	65.663	65.663	84.534
419	9.428	85.299	84.821	85.782	98.030	96.407	74.366	74.366	91.426
320	10.047	77.397	70.129	86.344	98.485	95.078	63.128	63.128	84.307
Average		78.920	76.733	84.107	98.381	96.137	66.061	66.061	87.557
Standard		8.983	12.555	13.444	1.291	1.423	11.912	11.912	6.076
Average		74.430	72.941	79.187	98.717	97.207	61.231	61.231	85.829
Standard		14.428	15.574	18.051	1.406	1.985	17.144	17.144	7.703

highest_acc(15 epoch)									
전체	크기	F1	Recall	Precision	SPEC	ACC	IoU	JACCARD	Balanced
288	1.408	29.714	85.769	17.969	98.753	98.712	17.449	17.449	92.261
98	1.924	83.781	73.860	96.782	99.978	99.751	72.089	72.089	86.919
383	2.072	45.802	80.118	32.067	98.947	98.831	29.703	29.703	89.531
114	2.195	83.862	88.271	79.872	99.659	99.487	72.208	72.208	93.965
369	2.255	74.056	80.234	96.112	99.981	99.670	58.801	58.801	80.107
359	2.360	74.691	88.898	81.547	99.796	99.397	59.605	59.605	84.347
Average		65.318	76.191	67.392	99.519	99.308	51.643	51.643	87.855
Standard		20.402	9.715	30.917	0.489	0.398	20.841	20.841	4.704
14	3.068	44.937	32.180	74.450	99.783	98.482	28.979	28.979	65.982
414	3.275	90.907	93.194	88.729	99.695	99.532	83.330	83.330	96.445
7	3.540	88.181	86.192	90.264	99.745	99.384	78.860	78.860	92.969
317	3.743	70.786	55.895	96.492	99.942	98.728	54.782	54.782	77.919
24	3.855	84.851	74.883	97.880	99.939	99.032	73.688	73.688	87.411
406	4.064	84.605	96.178	75.518	99.012	98.925	73.318	73.318	97.595
378	4.442	87.368	86.221	88.546	99.703	99.353	77.570	77.570	92.962
384	4.560	75.988	78.072	74.012	98.936	98.157	61.275	61.275	88.504
Average		78.453	75.352	85.736	99.595	98.949	66.475	66.475	87.473
Standard		14.125	20.118	9.150	0.389	0.446	16.692	16.692	9.984
258	5.156	90.632	90.164	91.104	99.528	99.052	82.869	82.869	94.846
8	5.396	84.190	90.800	78.478	98.465	98.020	72.697	72.697	94.632
47	5.617	73.842	63.956	87.344	99.621	98.220	58.531	58.531	81.788
208	5.635	50.413	39.390	70.001	99.194	96.487	33.701	33.701	69.292
322	5.785	75.552	94.143	63.093	97.691	97.548	60.710	60.710	95.917
392	5.809	82.742	74.466	93.088	99.752	98.668	70.564	70.564	87.109
416	5.854	75.779	87.991	66.544	97.474	96.962	61.004	61.004	92.733
373	5.912	73.768	80.140	68.335	97.704	96.681	58.439	58.439	88.922
343	6.918	85.149	88.987	81.627	98.181	97.415	74.138	74.138	93.584
92	7.042	85.133	86.435	83.870	98.766	97.913	74.115	74.115	92.600
401	7.099	87.109	88.069	86.171	98.683	97.778	77.162	77.162	93.376
22	7.185	74.356	60.073	97.549	99.856	96.389	59.179	59.179	79.964
224	7.539	82.576	86.740	78.793	97.406	96.339	70.323	70.323	92.073
352	8.037	85.080	79.125	91.959	99.304	97.481	74.004	74.004	89.215
407	8.153	75.086	75.849	74.337	98.255	96.855	60.110	60.110	87.052
116	9.161	70.523	59.903	85.721	98.267	92.590	54.468	54.468	79.085
96	9.523	81.692	69.644	98.782	99.874	96.019	69.051	69.051	84.759
Average		78.447	77.404	82.164	98.707	97.081	65.357	65.357	88.056
Standard		8.981	14.278	10.571	0.836	1.397	11.155	11.155	6.949
Average		75.905	76.592	80.434	99.099	97.989	63.048	63.048	87.845
Standard		14.491	15.590	17.851	0.817	1.500	16.240	16.240	7.643

highest_acc & lowest_loss(17 epoch)									
전체	크기	F1	Recall	Precision	SPEC	ACC	IoU	JACCARD	Balanced
89	1.590	0.000	0.000	0.000	100.000	99.490	0.000	0.000	50.000
167	2.097	49.340	99.162	32.840	98.512	98.517	32.749	32.749	98.837
347	2.142	77.047	67.199	90.278	99.932	99.629	62.664	62.664	83.566
413	2.471	75.058	66.022	86.960	99.913	99.619	60.075	60.075	82.968
404	2.511	27.007	40.108	20.358	97.760	96.948	15.612	15.612	68.934
206	2.931	84.885	80.406	89.892	99.837	99.492	73.739	73.739	90.121
Average		52.223	58.816	53.388	99.326	98.949	40.806	40.806	79.071
Standard		30.485	31.690	36.932	0.870	0.974	26.766	26.766	15.791
78	3.122	88.334	76.861	98.471	99.968	99.364	75.955	75.955	88.415
150	3.127	74.150	59.711	97.800	99.970	99.078	58.919	58.919	79.840
63	3.164	39.576	32.692	50.134	99.325	97.969	24.670	24.670	66.008
362	3.506	61.331	76.042	51.389	98.054	97.474	44.229	44.229	87.048
121	3.889	78.546	85.950	72.317	98.680	98.188	64.671	64.671	92.315
356	4.139	91.924	88.918	95.141	99.847	99.490	85.055	85.055	94.382
398	4.226	27.082	16.147	83.882	99.911	97.585	15.661	15.661	58.029
265	4.266	86.187	78.526	95.504	99.880	99.208	75.726	75.726	89.203
Average		68.141	64.356	80.580	99.454	98.544	55.811	55.811	81.905
Standard		22.121	24.778	19.071	0.876	0.776	23.615	23.615	12.314
297	5.705	79.583	67.455	97.028	99.848	97.634	66.090	66.090	83.652
41	6.211	92.828	92.085	93.583	99.490	98.936	86.616	86.616	95.788
93	6.248	80.810	81.586	80.049	98.301	97.012	67.799	67.799	89.943
345	6.610	85.764	88.991	82.762	98.699	98.062	75.075	75.075	93.845
34	6.612	86.949	90.362	83.784	98.162	97.421	76.911	76.911	94.262
123	6.953	87.561	82.977	92.681	99.508	98.354	77.874	77.874	91.242
358	7.292	88.698	87.438	89.994	99.253	98.409	79.691	79.691	93.345
285	7.366	85.487	88.767	82.441	97.307	96.243	74.653	74.653	93.037
53	7.614	86.099	83.216	89.189	98.996	97.568	75.591	75.591	91.106
390	7.720	86.801	78.808	96.600	99.772	98.181	76.681	76.681	89.290
115	7.871	88.796	83.610	94.668	99.070	96.520	79.849	79.849	91.340
143	8.037	91.876	91.373	92.384	99.272	98.576	84.972	84.972	95.323
335	8.157	82.987	87.059	79.279	96.494	95.234	70.921	70.921	91.776
54	8.180	72.760	58.636	95.849	99.758	96.187	57.183	57.183	79.197
263	9.049	85.877	79.993	92.696	98.978	96.330	75.250	75.250	89.486
35	9.392	84.400	81.632	87.362	98.338	96.276	73.010	73.010	89.985
299	9.497	45.315	40.432	51.539	97.595	94.194	29.295	29.295	69.014
Average		83.094	80.260	87.170	98.755	97.126	72.204	72.204	89.508
Standard		10.480	12.977	10.557	0.919	1.252	12.650	12.650	6.494
Average		72.829	71.788	78.378	99.018	97.799	61.382	61.382	85.403
Standard		22.872	23.399	24.355	0.914	1.357	23.146	23.146	11.600

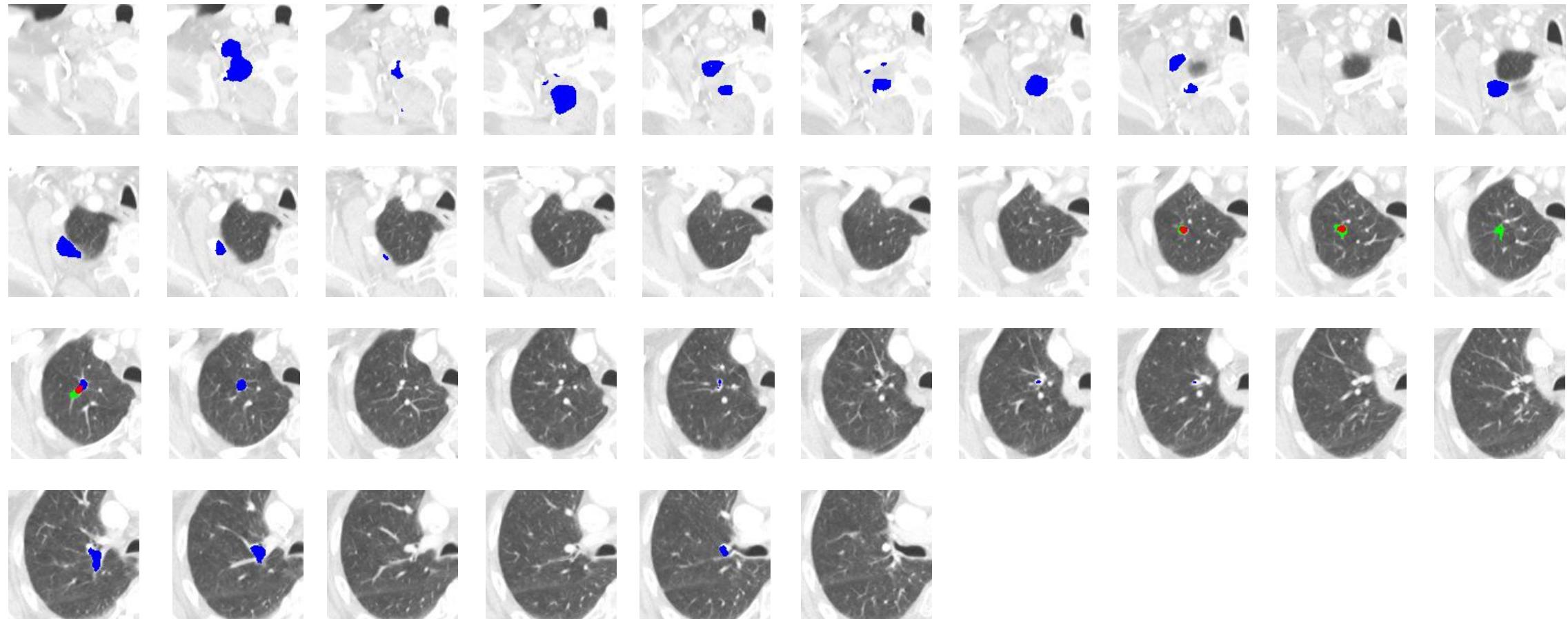
highest_acc(4 epoch)									
전체	크기	F1	Recall	Precision	SPEC	ACC	IoU	JACCARD	Balanced
326	1.381	0.000	0.000	0.000	97.427	97.120	0.000	0.000	48.713
386	1.637	18.760	19.472	18.098	99.453	98.960	10.351	10.351	59.463
252	2.195	76.857	85.851	69.569	99.514	99.339	62.413	62.413	92.682
250	2.248	81.870	84.672	79.249	99.813	99.686	69.305	69.305	92.242
333	2.874	74.611	78.211	71.328	99.443	99.074	59.503	59.503	88.827
365	2.904	75.159	82.258	69.189	99.181	98.811	60.204	60.204	90.720
Average		54.543	58.410	51.239	99.139	98.832	43.630	43.630	78.775
Standard		32.475	34.956	30.469	0.787	0.816	27.537	27.537	17.772
355	3.066	92.241	90.950	93.570	99.838	99.613	85.600	85.600	95.394
146	3.169	87.011	86.697	87.327	99.734	99.484	77.008	77.008	93.216
329	3.411	91.310	90.423	92.215	99.831	99.627	84.009	84.009	95.127
411	3.411	91.457	91.481	91.434	99.811	99.630	84.259	84.259	95.646
176	3.484	74.182	59.713	97.906	99.975	99.206	58.980	58.980	79.844
131	3.928	85.480	85.018	85.947	99.626	99.244	74.642	74.642	92.322
420	4.172	77.803	89.478	68.823	98.451	98.121	63.670	63.670	93.965
268	4.577	68.807	83.529	58.497	97.149	96.524	52.447	52.447	90.339
Average		83.536	84.661	84.465	99.302	98.929	72.574	72.574	91.981
Standard		8.307	9.813	12.755	0.931	1.022	11.888	11.888	4.880
197	5.484	78.960	78.926	81.105	98.740	97.306	65.235	65.235	87.833
101	6.205	70.750	60.888	84.424	99.448	97.644	54.739	54.739	80.168
421	6.393	90.741	93.436	88.197	99.201	98.855	83.051	83.051	96.319
225	6.716	85.483	93.076	79.036	98.406	98.082	74.647	74.647	95.741
46	6.877	88.359	91.020	85.849	98.052	97.244	79.146	79.146	94.536
292	7.203	87.360	92.292	82.928	97.584	96.984	77.557	77.557	94.928
45	7.395	53.559	43.526	69.604	99.470	97.952	36.574	36.574	71.498
340	7.918	86.209	82.603	90.144	99.102	97.610	75.761	75.761	90.853
376	8.189	84.236	90.785	78.568	96.839	96.153	72.766	72.766	93.812
239	8.480	72.006	60.645	88.604	98.984	94.567	56.257	56.257	79.815
417	8.605	82.686	80.080	85.467	98.412	96.497	70.482	70.482	89.246
397	8.621	79.686	78.444	80.967	98.803	97.562	66.232	66.232	88.624
173	8.972	78.135	65.756	96.255	99.591	94.929	64.116	64.116	82.674
387	9.396	85.078	81.160	89.393	98.417	95.981	74.031	74.031	89.789
368	9.730	86.043	91.850	80.927	96.696	96.054	75.505	75.505	94.273
26	10.351	77.281	75.254	79.420	98.039	95.956	62.974	62.974	86.646
276	10.603	78.403	78.451	78.355	95.336	92.346	64.478	64.478	86.894
Average		80.293	78.600	83.485	98.300	96.571	67.856	67.856	88.450
Standard		8.600	13.646	5.938	1.109	1.524	10.935	10.935	6.575
Average		76.391	76.014	78.130	98.773	97.653	64.782	64.782	87.394
Standard		19.673	21.434	20.193	1.092	1.750	19.054	19.054	10.716

fold 5									
highest_acc(18 epoch)									
전체	크기	F1	Recall	Precision	SPEC	ACC	IoU	JACCARD	Balanced
325	1.360	78.381	68.022	92.462	99.969	99.793	64.448	64.448	83.996
385	1.886	35.949	22.085	96.569	99.994	99.388	21.913	21.913	61.040
366	2.162	70.520	83.834	60.856	99.515	99.375	54.465	54.465	91.674
388	2.227	64.900	61.634	68.532	99.734	99.380	48.039	48.039	80.684
346	2.847	71.920	58.897	97.722	99.985	99.489	56.152	56.152	78.441
286	2.970	82.512	78.388	87.093	99.691	99.139	70.230	70.230	89.040
Average		67.364	61.810	83.872	99.815	99.427	52.541	52.541	80.812
Standard		15.136	20.003	14.155	0.181	0.195	15.437	15.437	9.937
296	3.181	73.557	84.141	65.338	99.199	98.933	58.174	58.174	91.670
379	3.275	81.334	69.755	97.524	99.955	99.203	68.541	68.541	84.855
334	3.304	64.790	60.838	69.292	99.439	98.651	47.918	47.918	80.138
122	3.539	89.967	86.171	94.113	99.862	99.519	81.763	81.763	93.016
391	3.869	78.988	91.237	69.639	98.768	98.542	65.273	65.273	95.003
242	4.355	59.668	71.879	51.003	97.543	96.661	42.519	42.519	84.711
284	4.544	81.833	80.147	83.592	99.540	98.990	69.252	69.252	89.844
Average		75.734	77.738	75.786	99.186	98.643	61.920	61.920	88.462
Standard		9.742	9.884	15.458	0.766	0.864	12.473	12.473	4.958
389	5.040	74.146	95.076	60.768	97.643	97.548	58.914	58.914	98.360
210	5.098	72.465	75.198	69.923	97.883	96.490	58.819	58.819	88.540
363	5.250	75.671	72.120	79.588	99.553	98.905	60.863	60.863	85.837
300	6.229	82.885	71.550	98.487	99.942	98.517	70.772	70.772	85.746
145	6.296	80.218	95.605	69.097	97.149	97.053	66.970	66.970	96.377
4	6.615	76.808	72.456	81.717	99.123	97.755	62.348	62.348	85.790
374	6.621	84.276	90.912	78.544	98.127	97.621	72.826	72.826	94.519
364	7.075	76.970	89.116	67.738	96.057	95.467	62.562	62.562	92.586
6	7.078	63.312	47.090	96.581	99.870	96.038	46.318	46.318	73.480
52	7.398	89.733	89.567	89.900	98.680	97.623	81.379	81.379	94.123
42	7.533	86.900	87.000	86.800	98.000	96.556	76.834	76.834	92.500
409	7.694	63.669	47.441	96.771	99.863	95.678	46.701	46.701	73.652
193	7.944	80.804	70.813	94.079	99.382	95.901	67.791	67.791	85.097
290	8.784	68.123	61.441	76.436	97.559	93.436	51.656	51.656	79.500
12	9.527	78.223	67.203	93.567	98.911	92.865	64.235	64.235	83.057
410	10.317	77.941	72.826	83.828	97.897	94.634	63.855	63.855	85.362
418	14.632	39.246	27.945	65.895	98.746	93.096	24.414	24.414	63.345
Average		74.788	72.551	81.748	98.493	96.187	60.898	60.898	85.522
Standard		11.354	18.118	11.744	1.054	1.777	13.001	13.001	8.779
Average		73.524	71.613	80.782	98.919	97.408	59.465	59.465	85.266
Standard		12.274	17.813	13.500	1.026	1.997	13.853	13.853	8.692

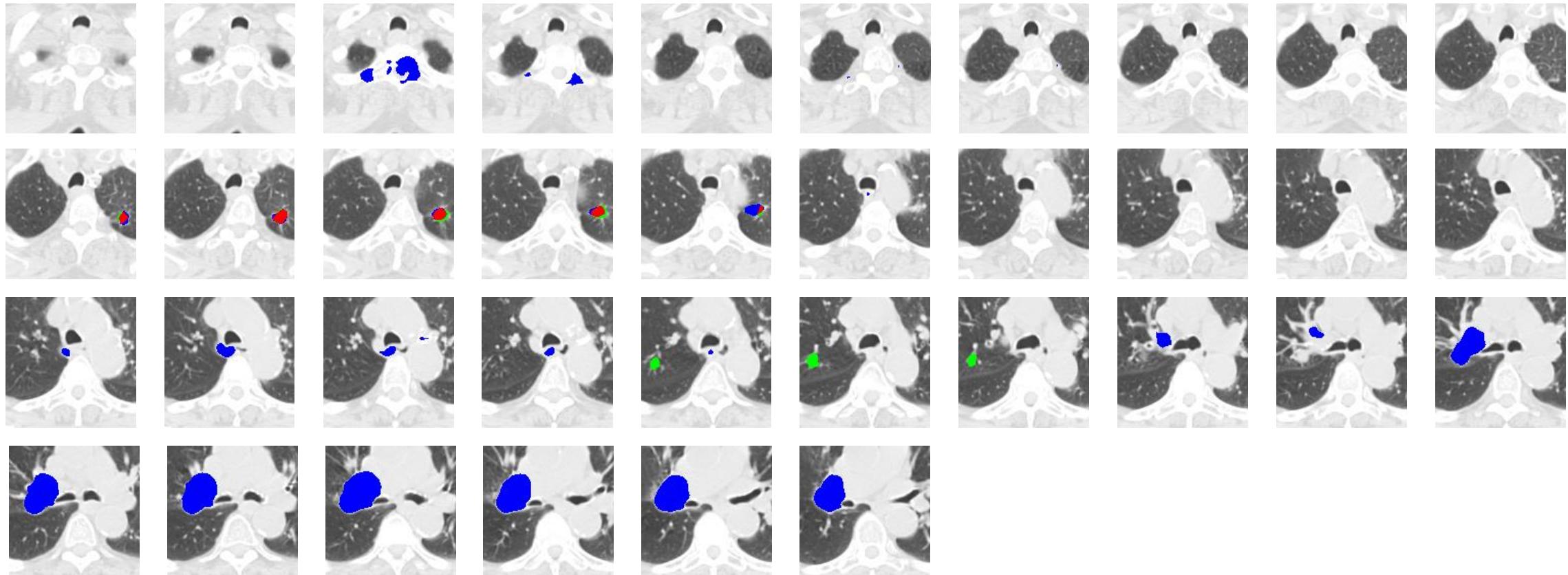
F1	Recall	Precision	SPEC	ACC	IoU	JACCARD	Balanced ACC
74.616	73.789	79.382	98.905	97.611	61.982	61.982	86.347

# fold 1

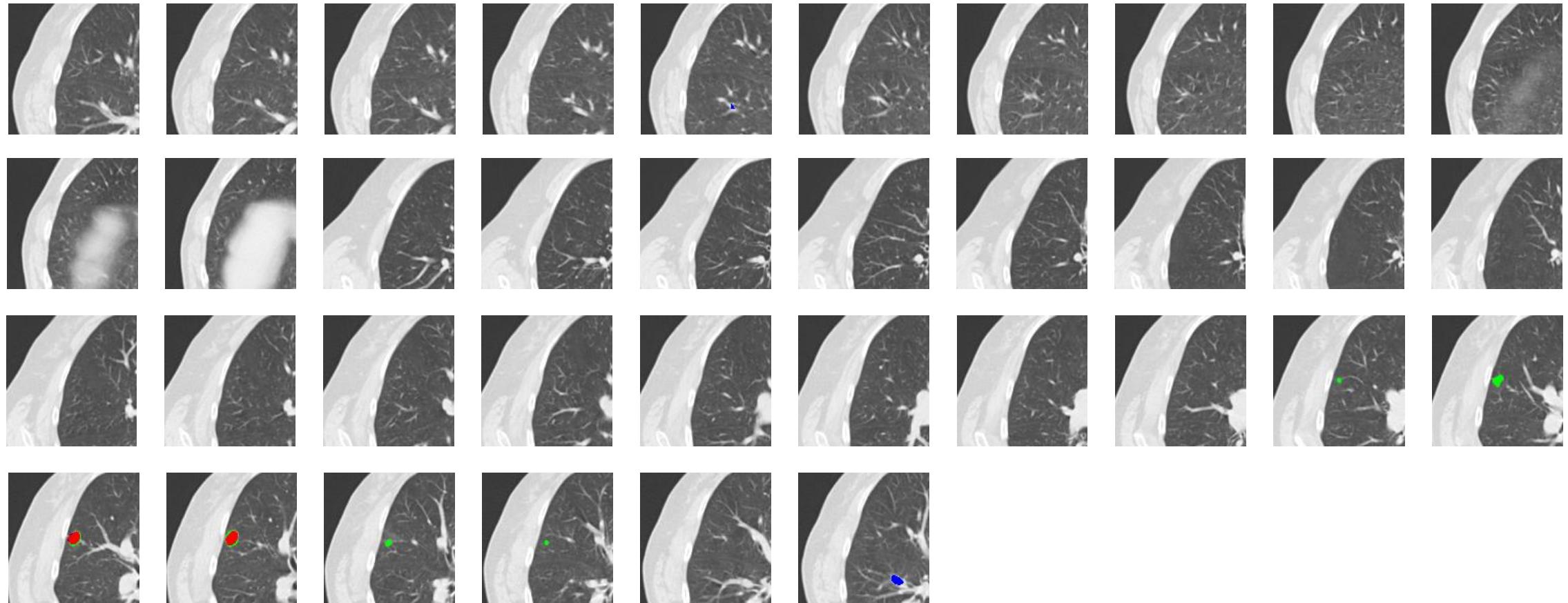
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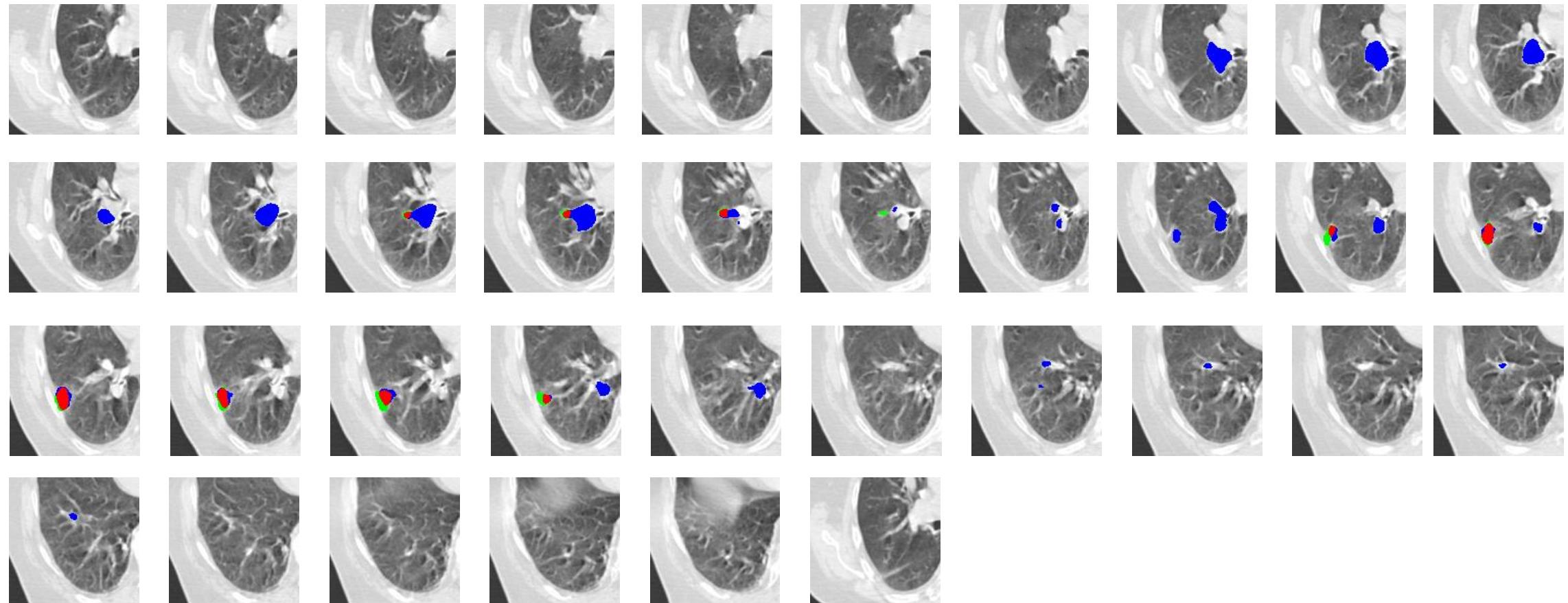
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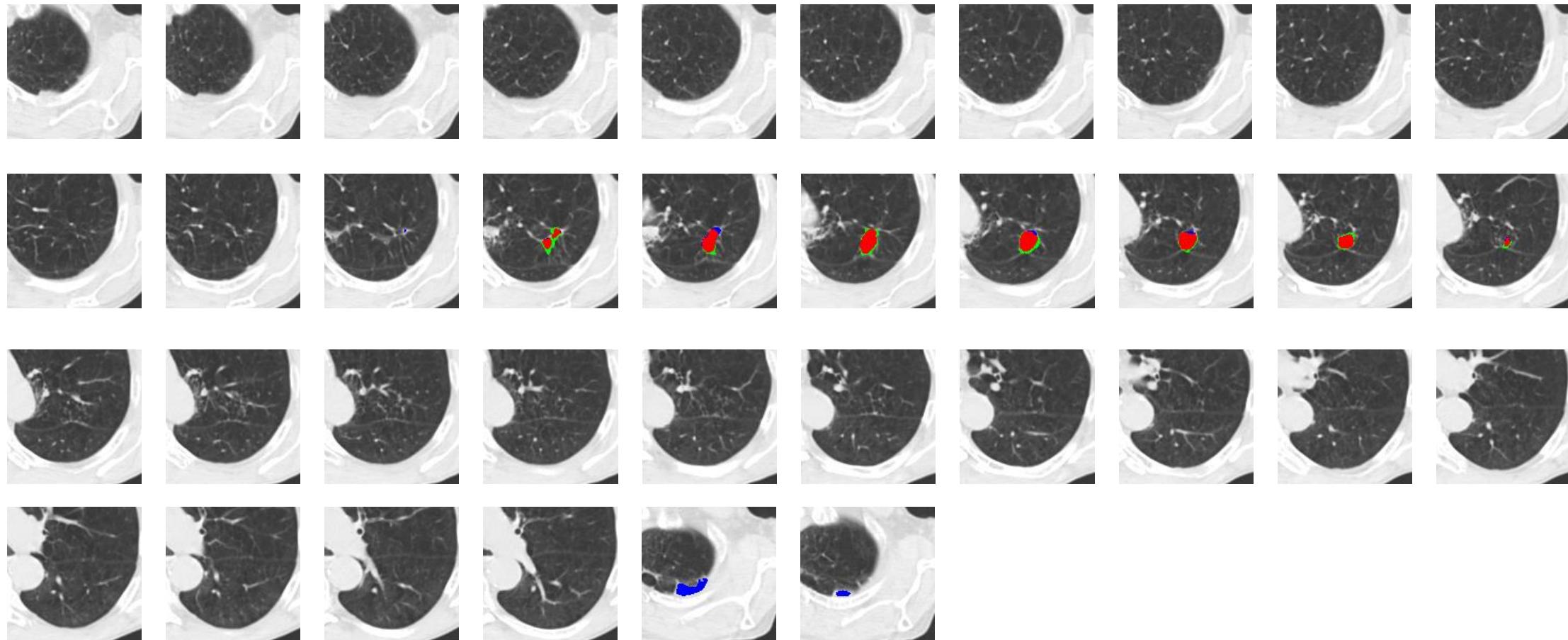
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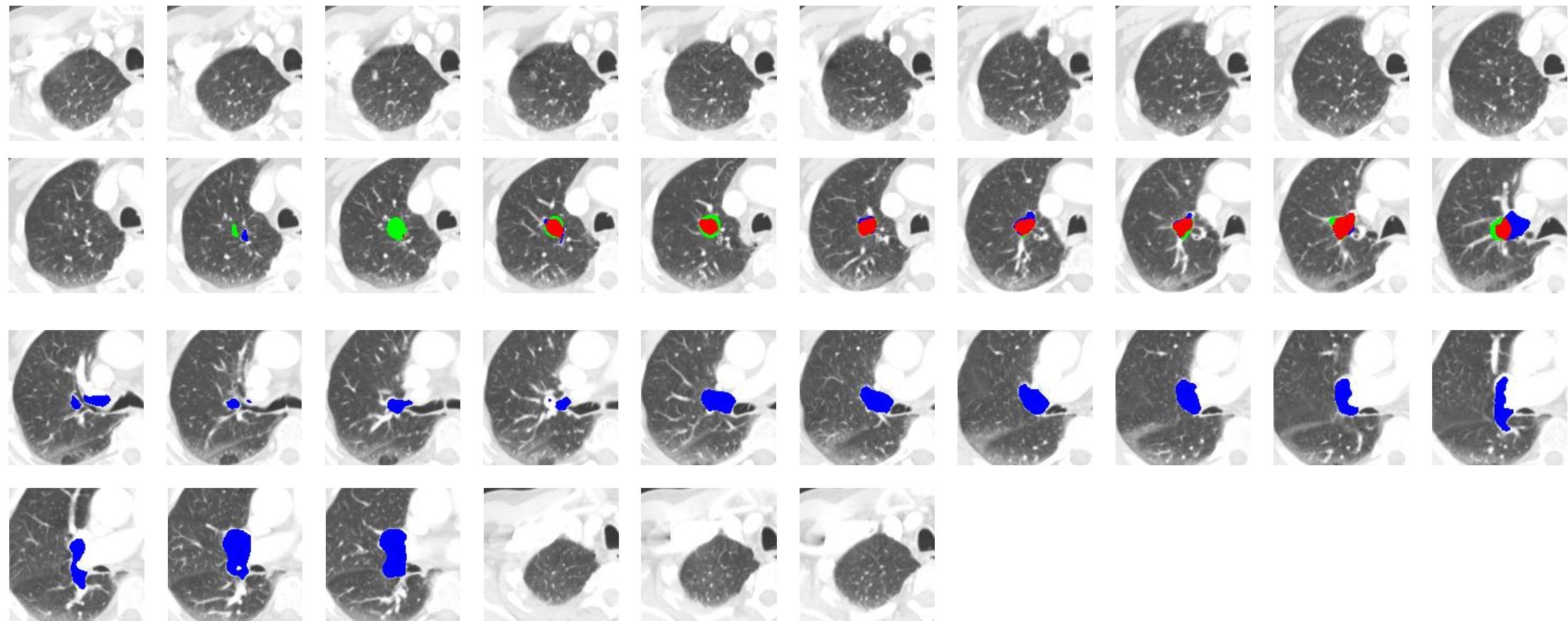
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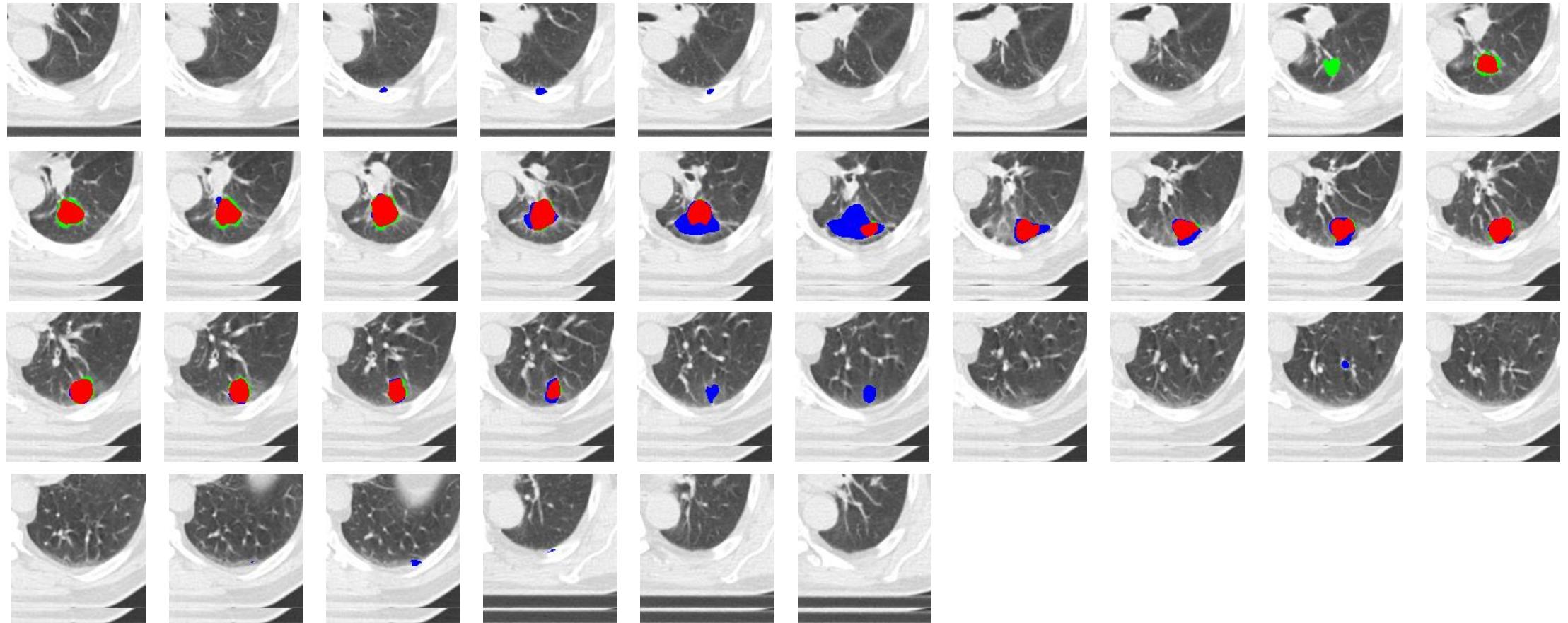
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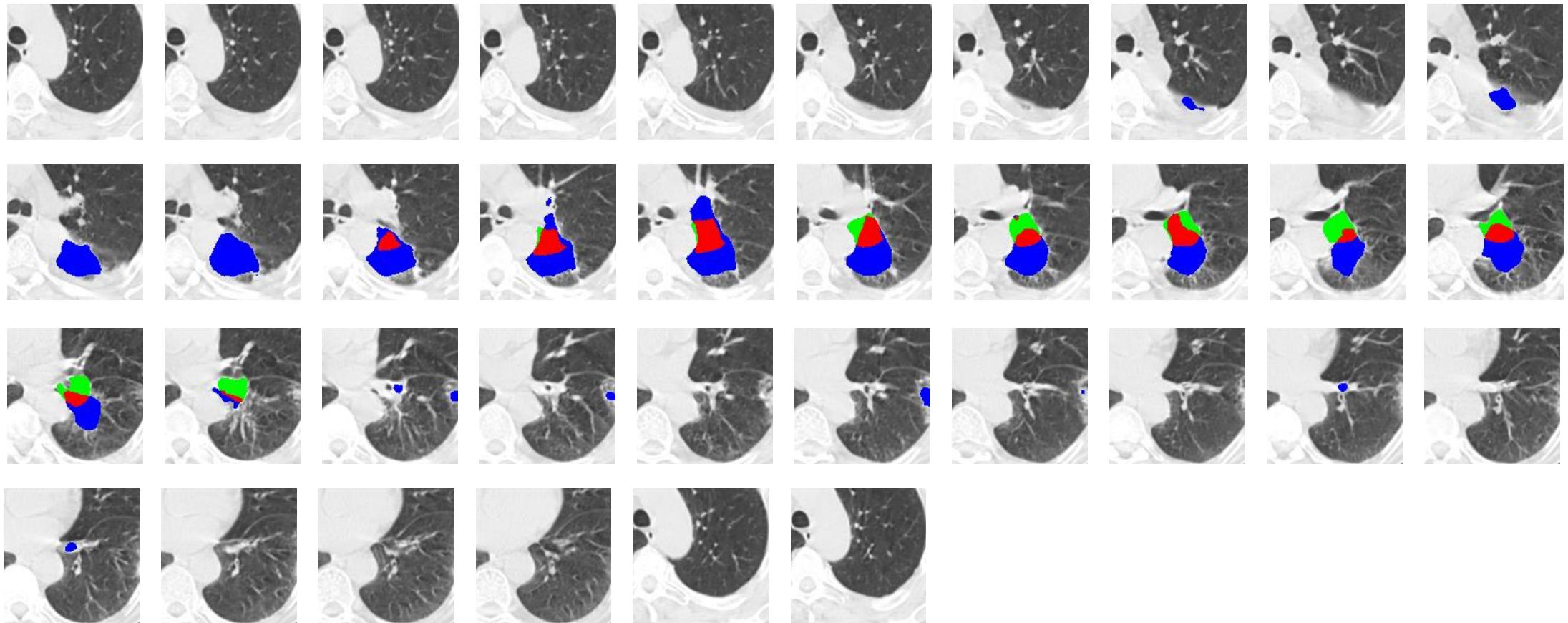
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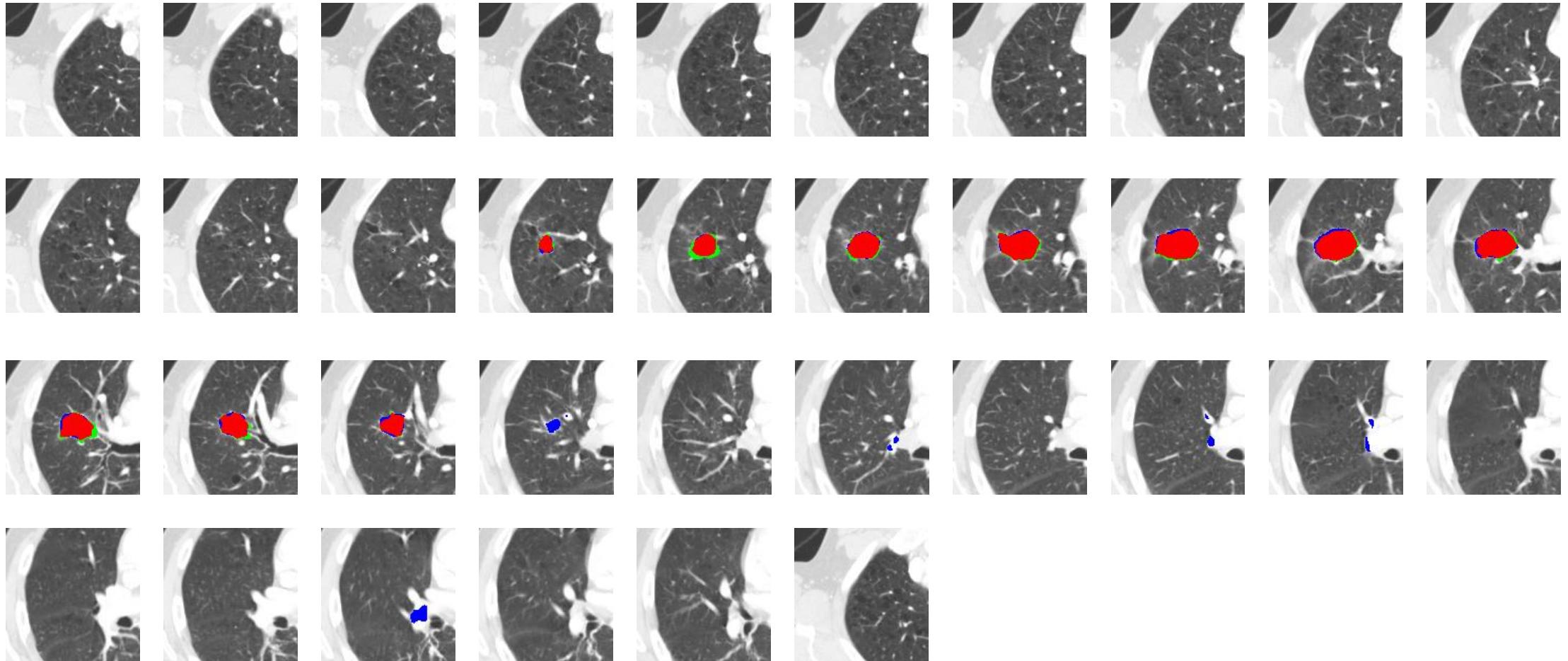
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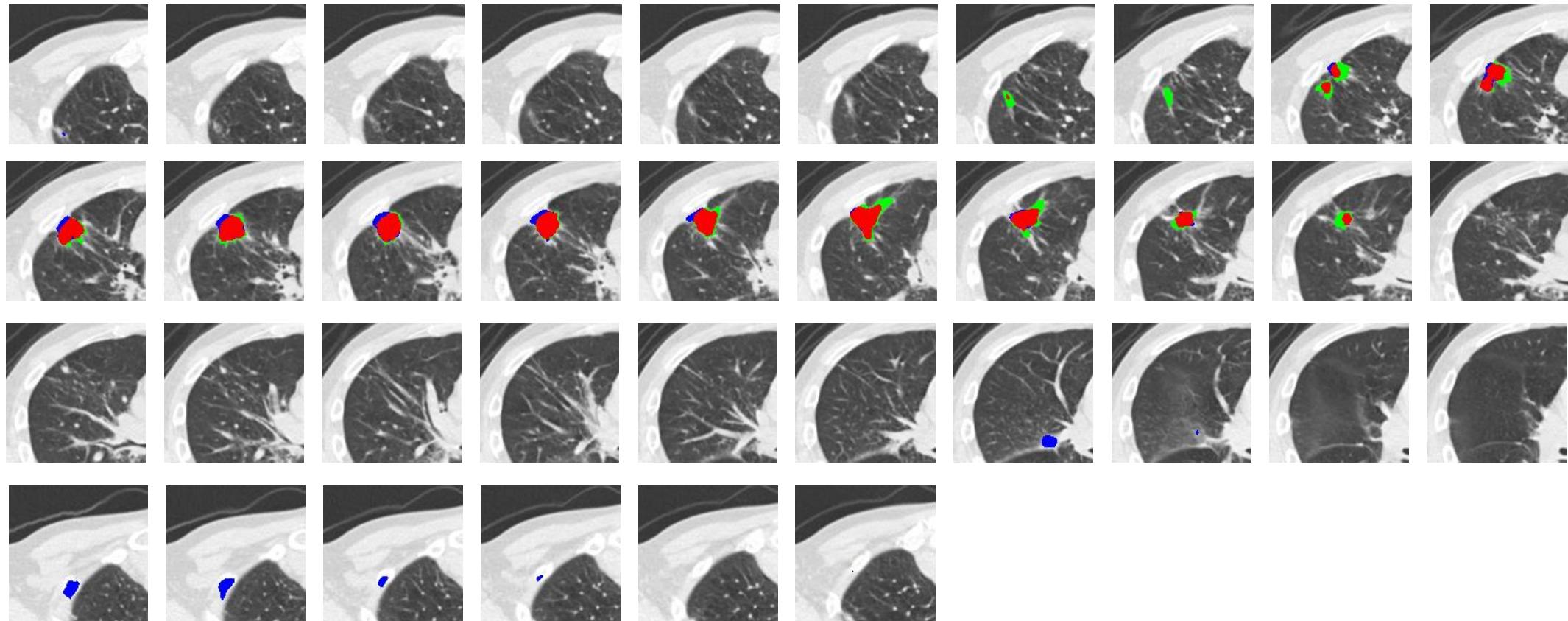
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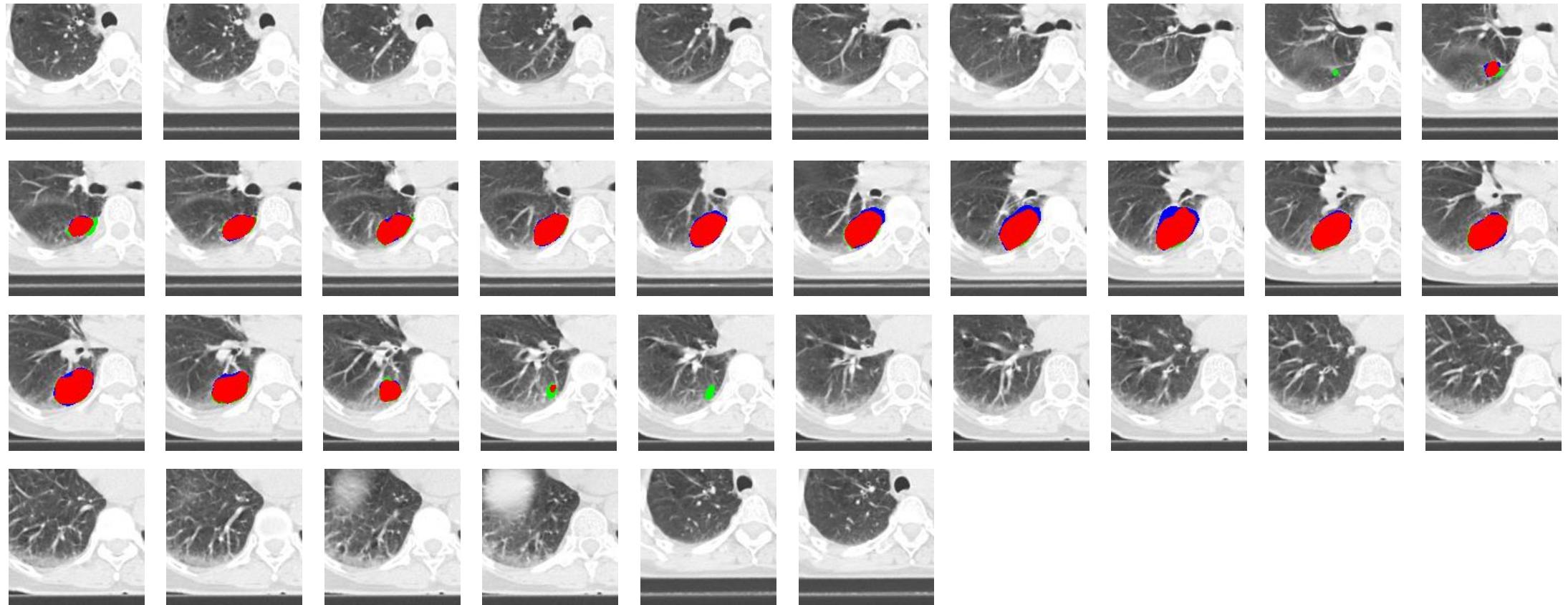
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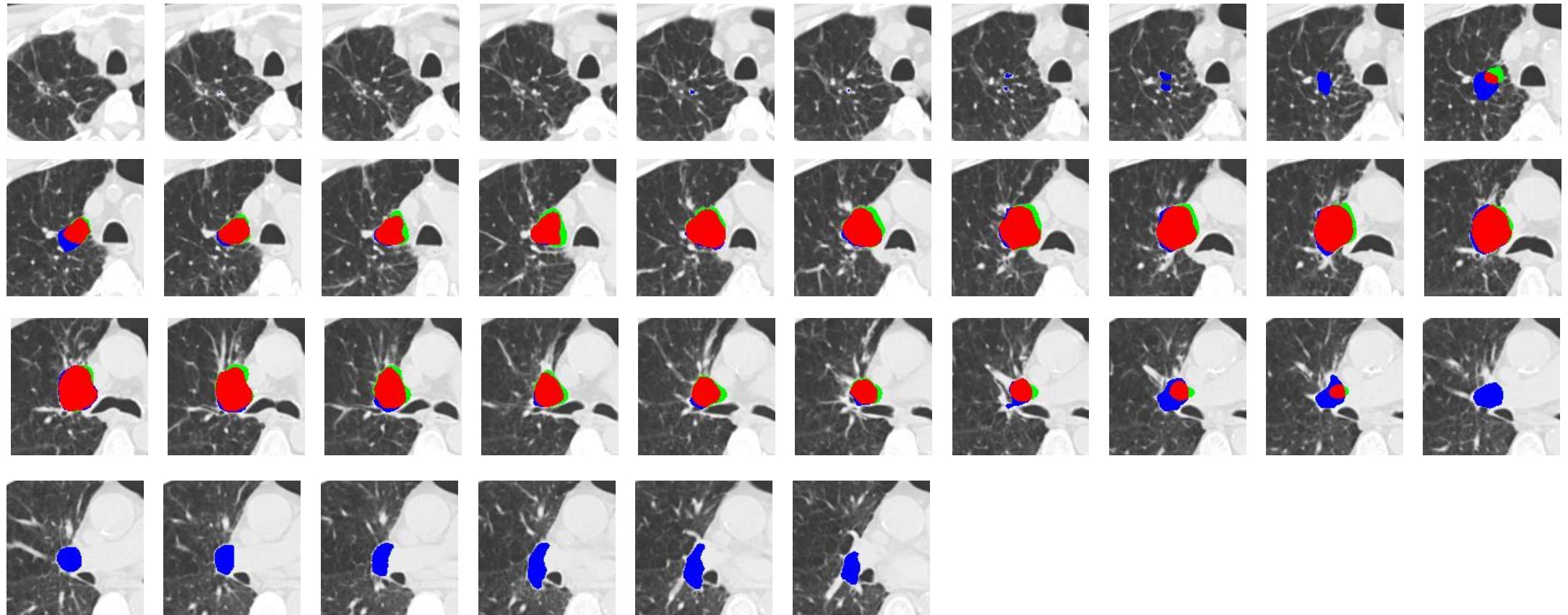
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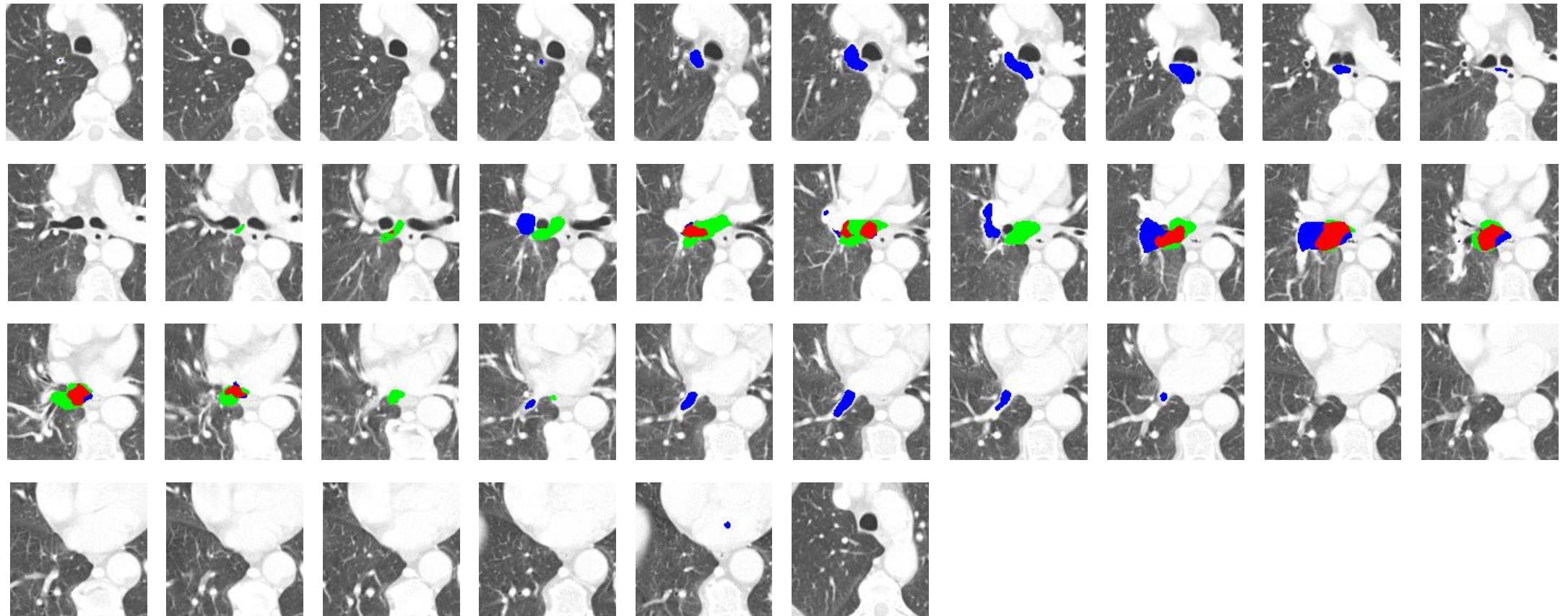
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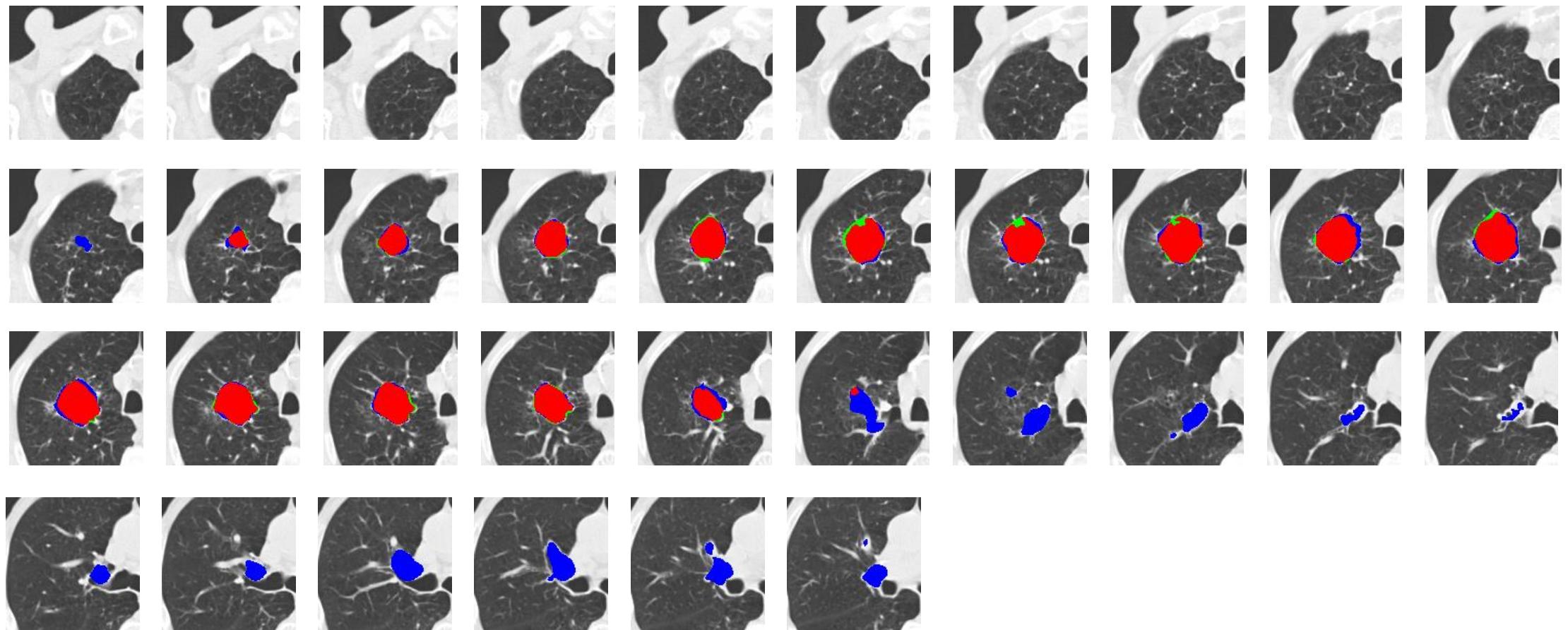
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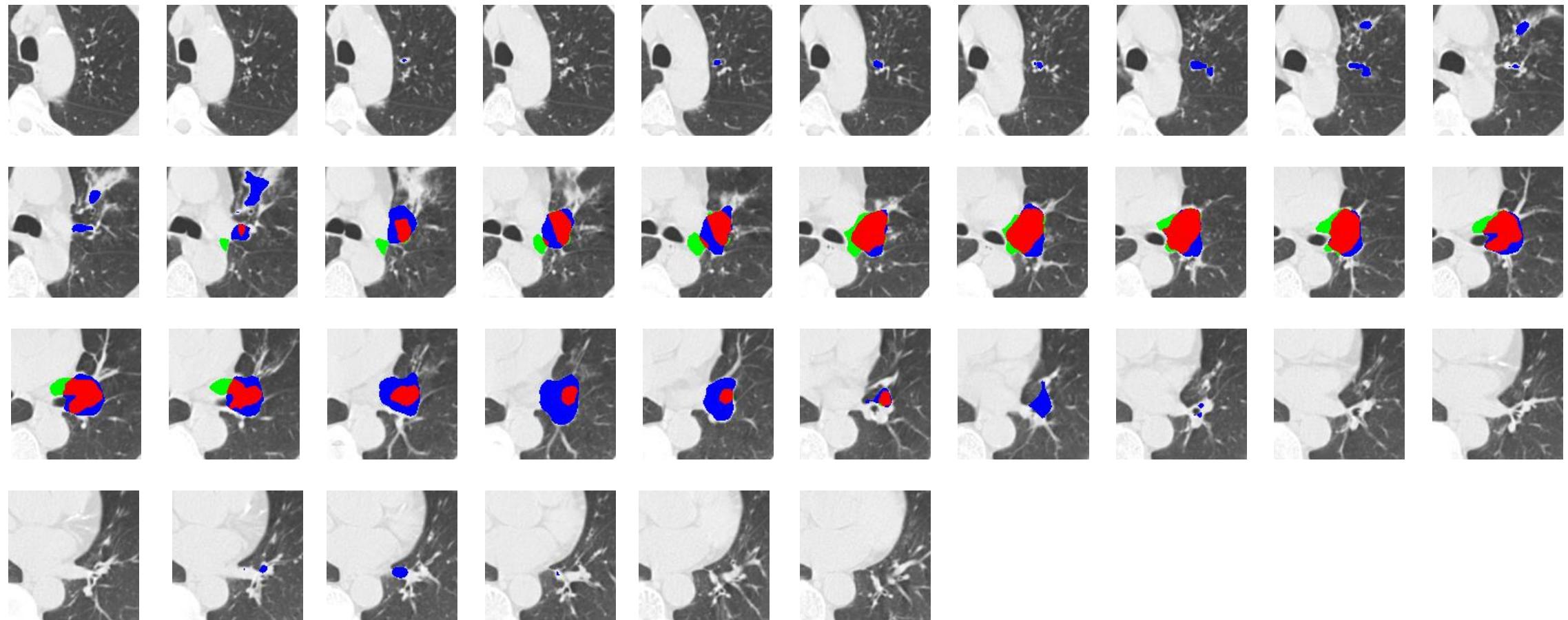
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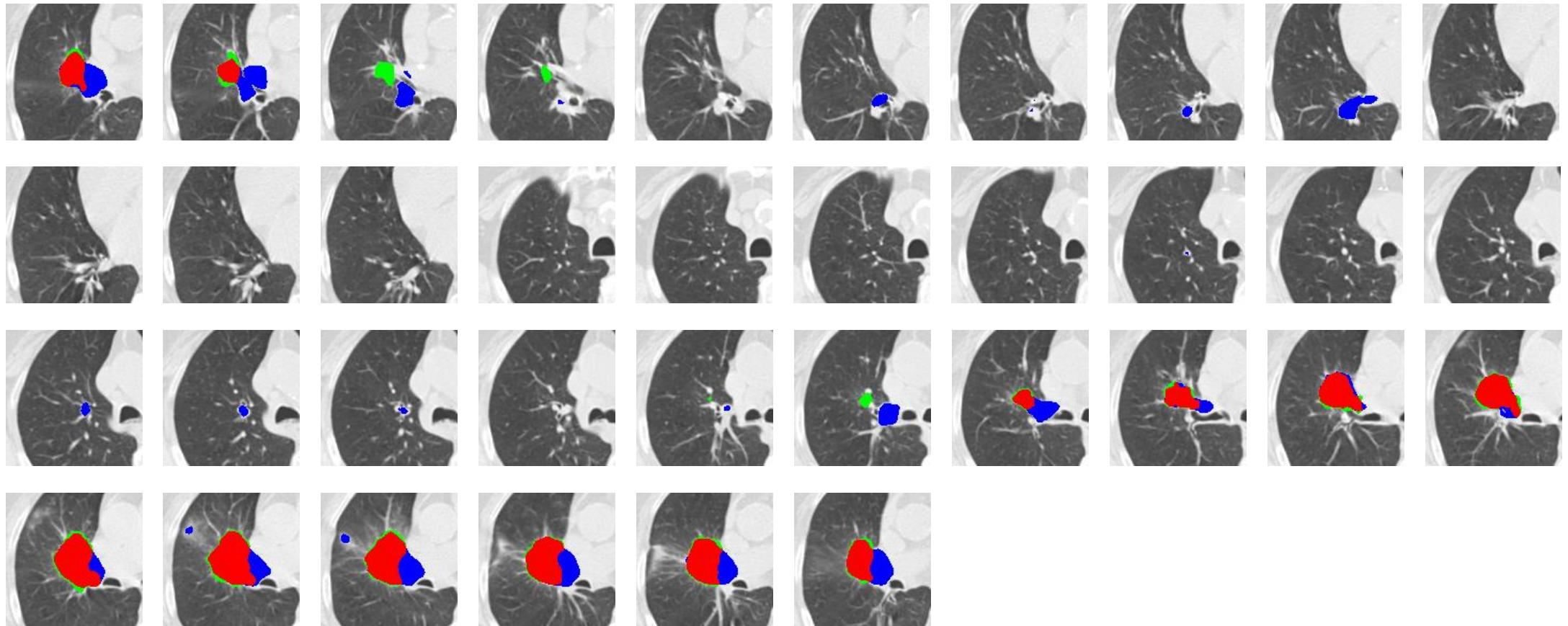
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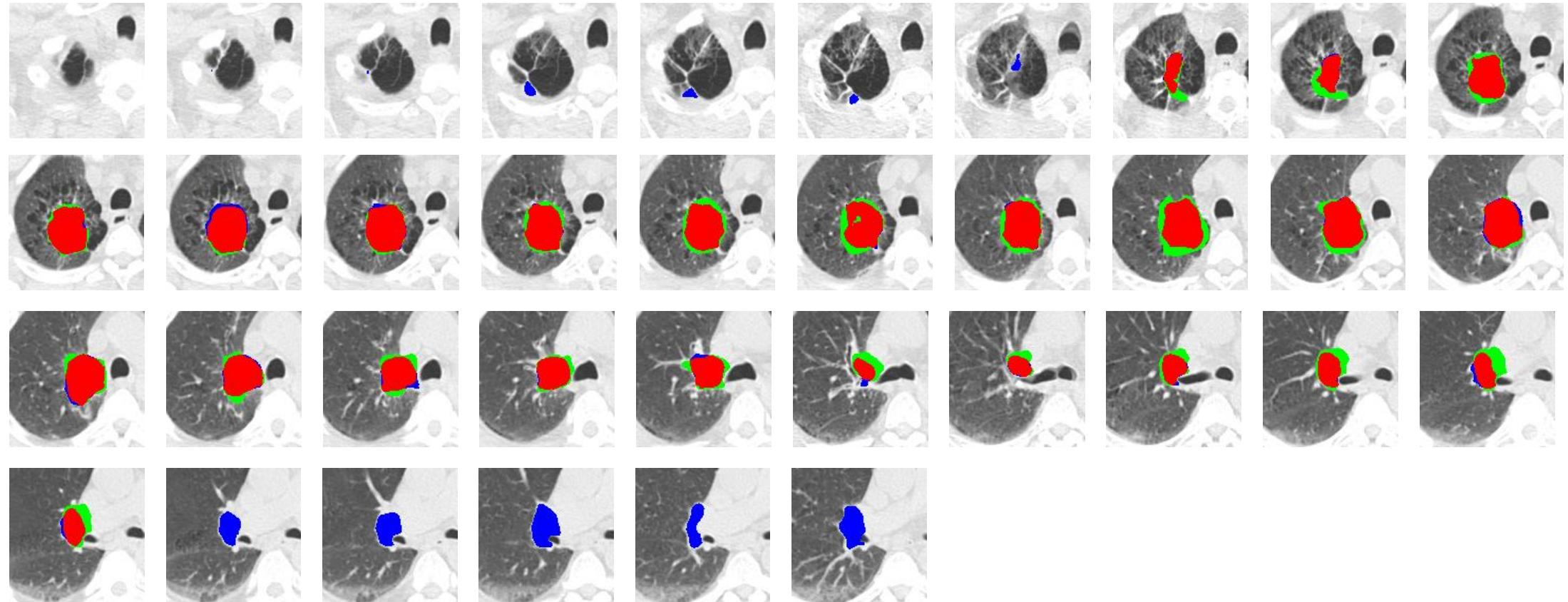
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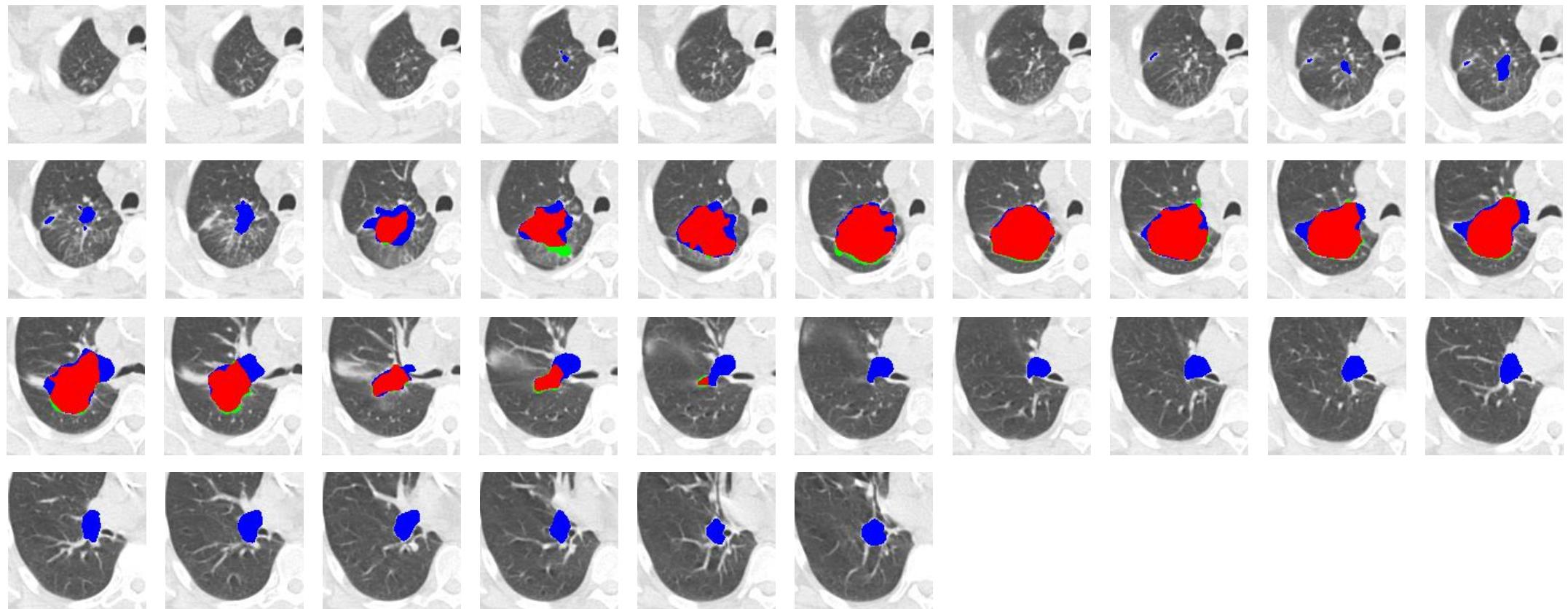
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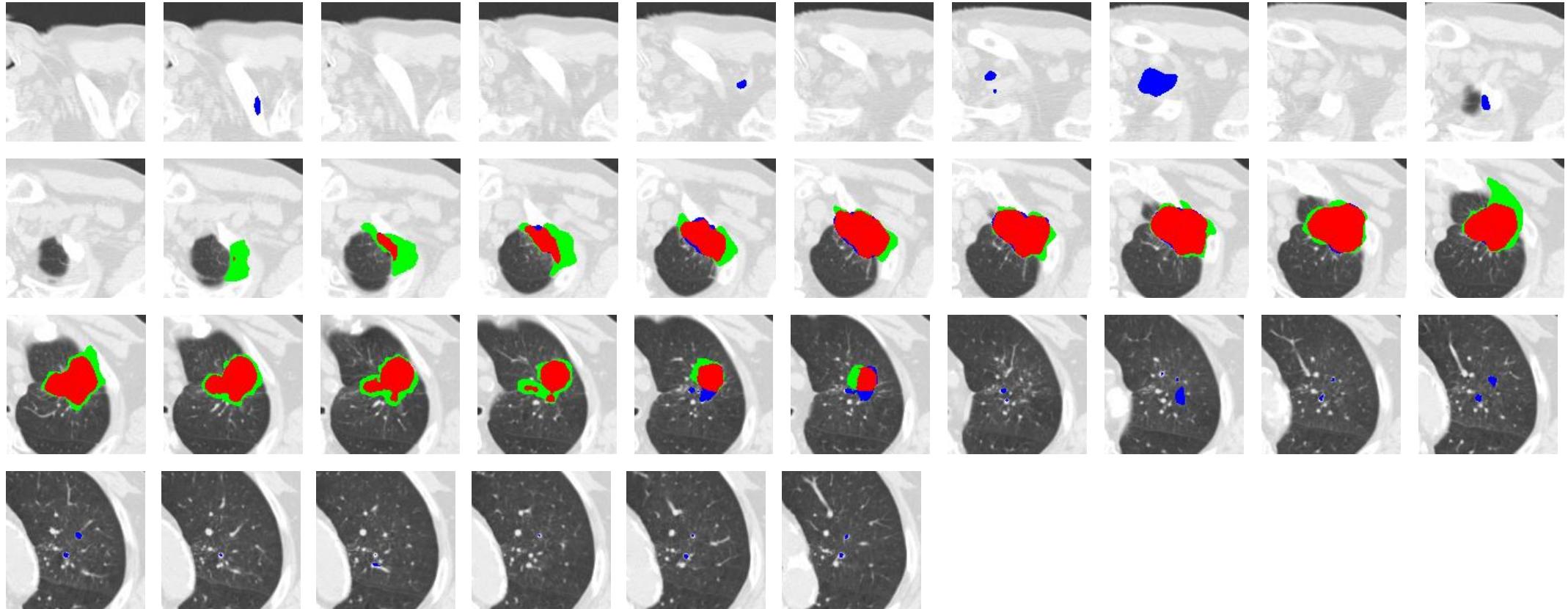
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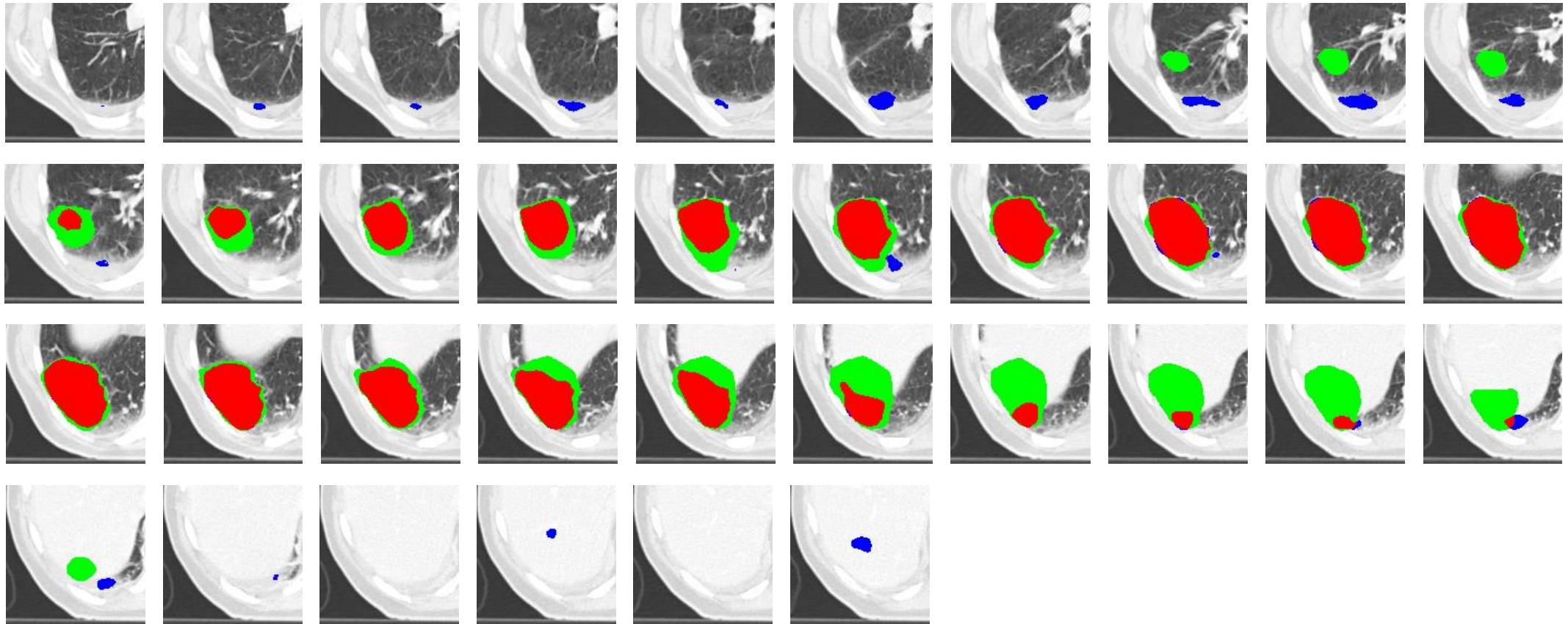
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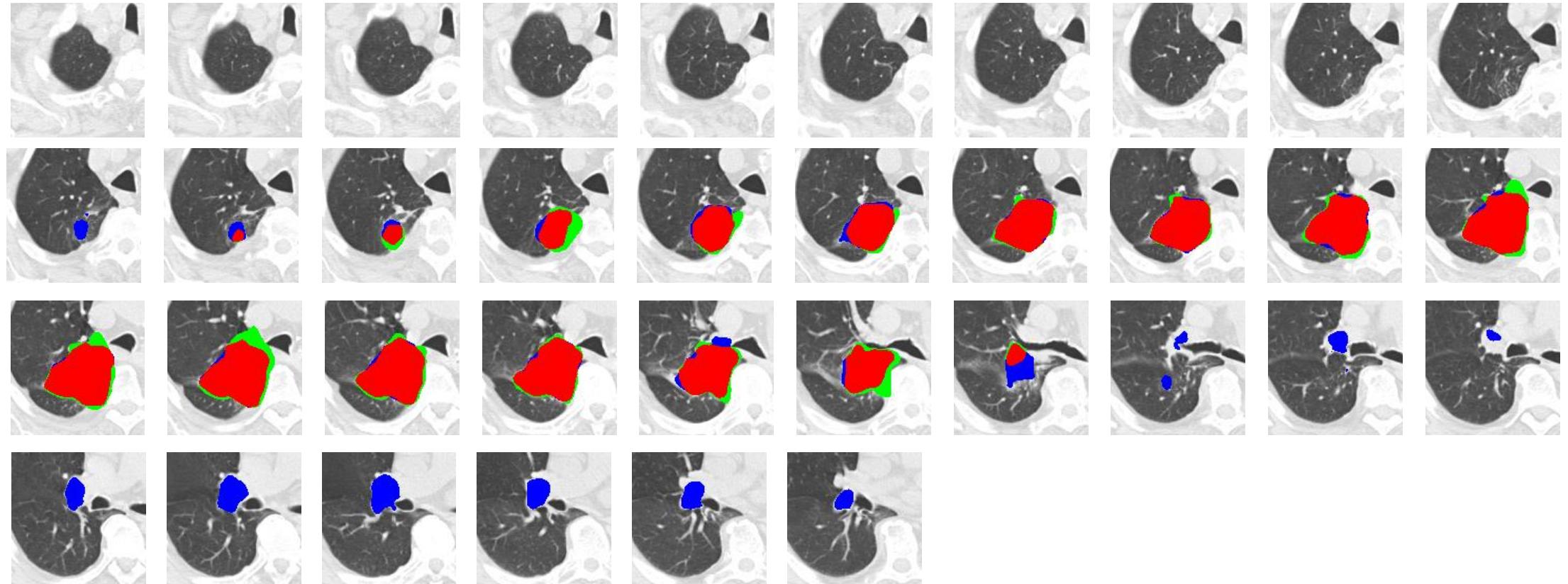
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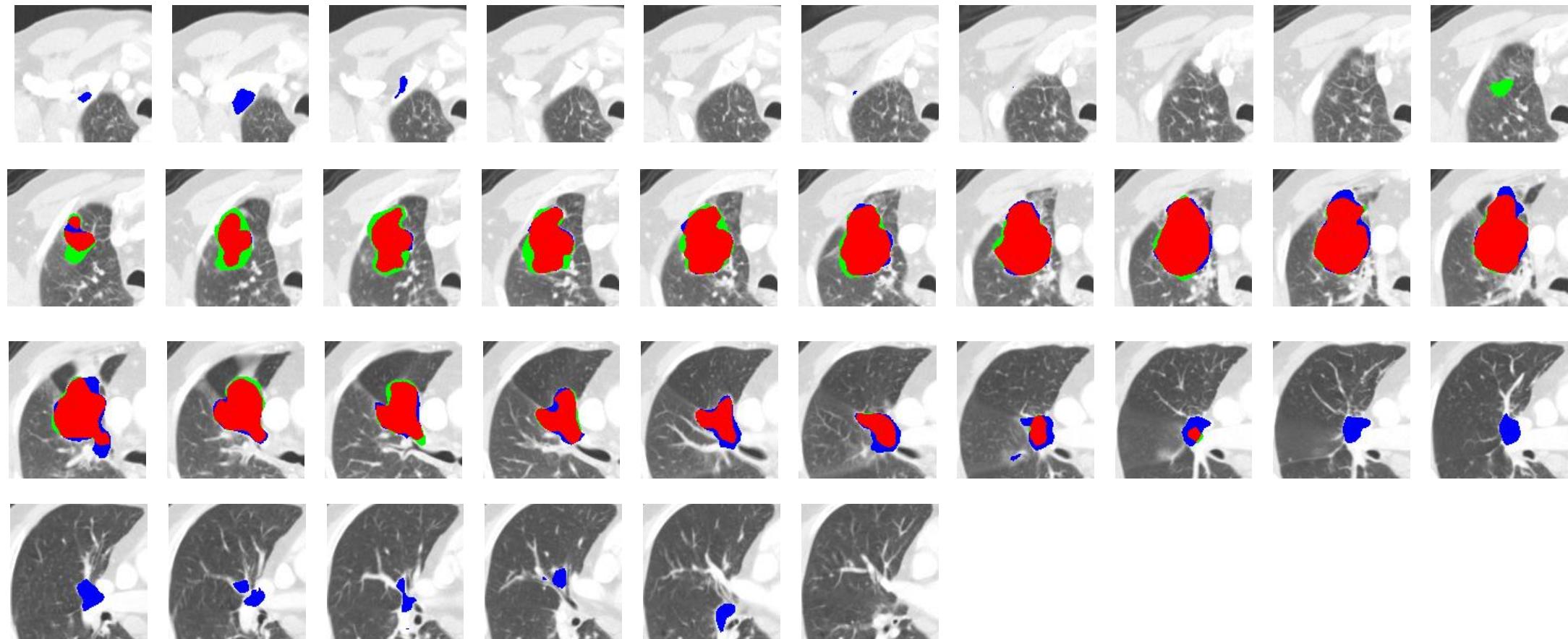
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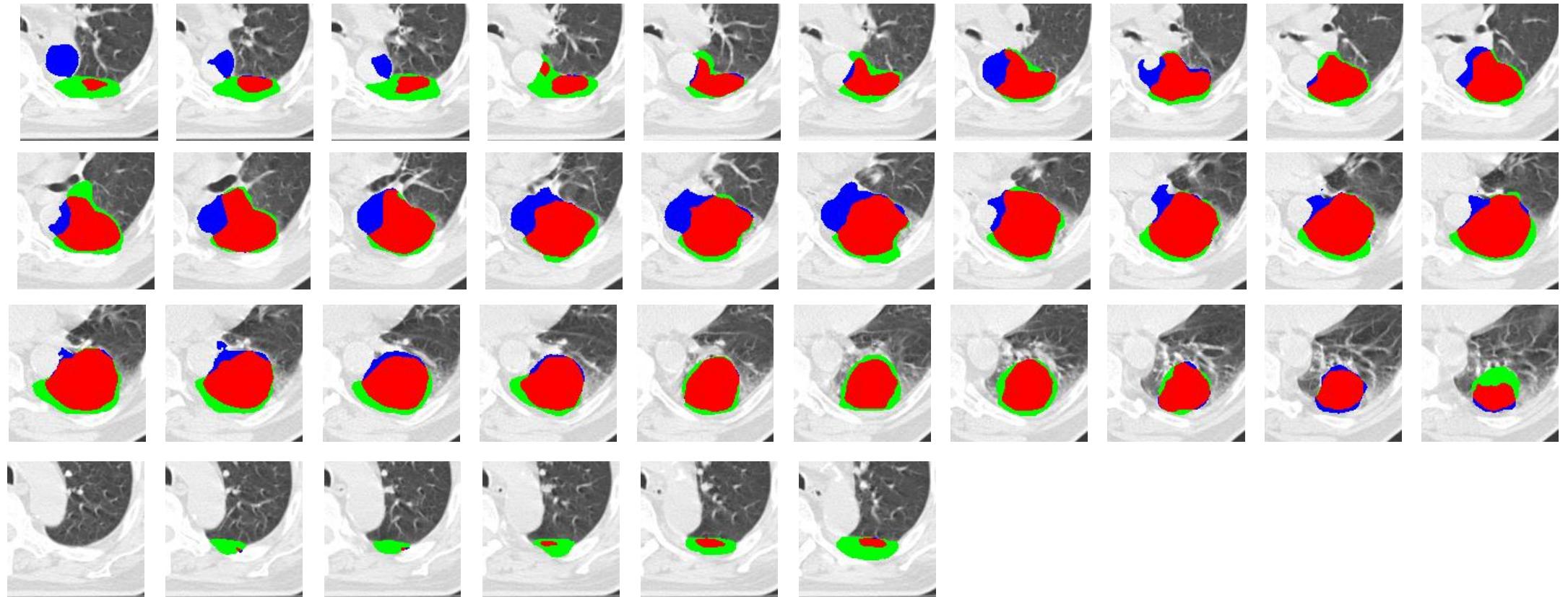
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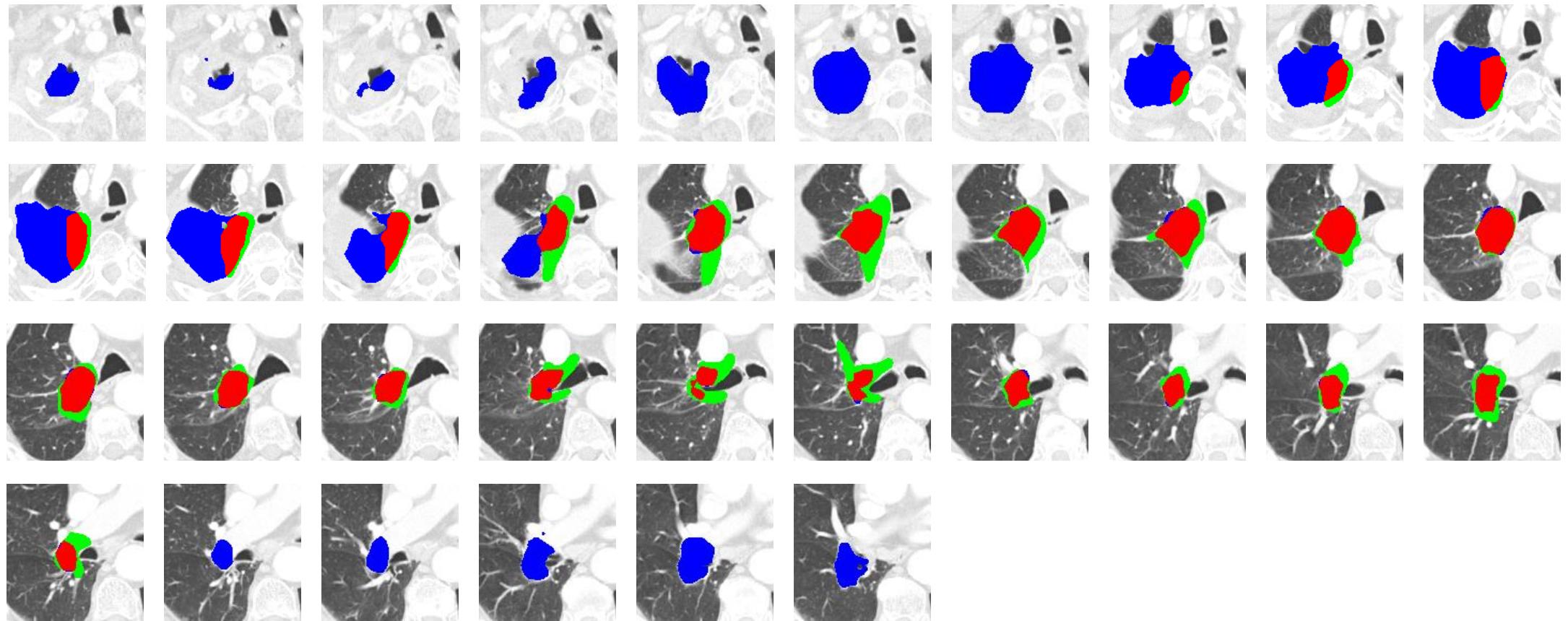
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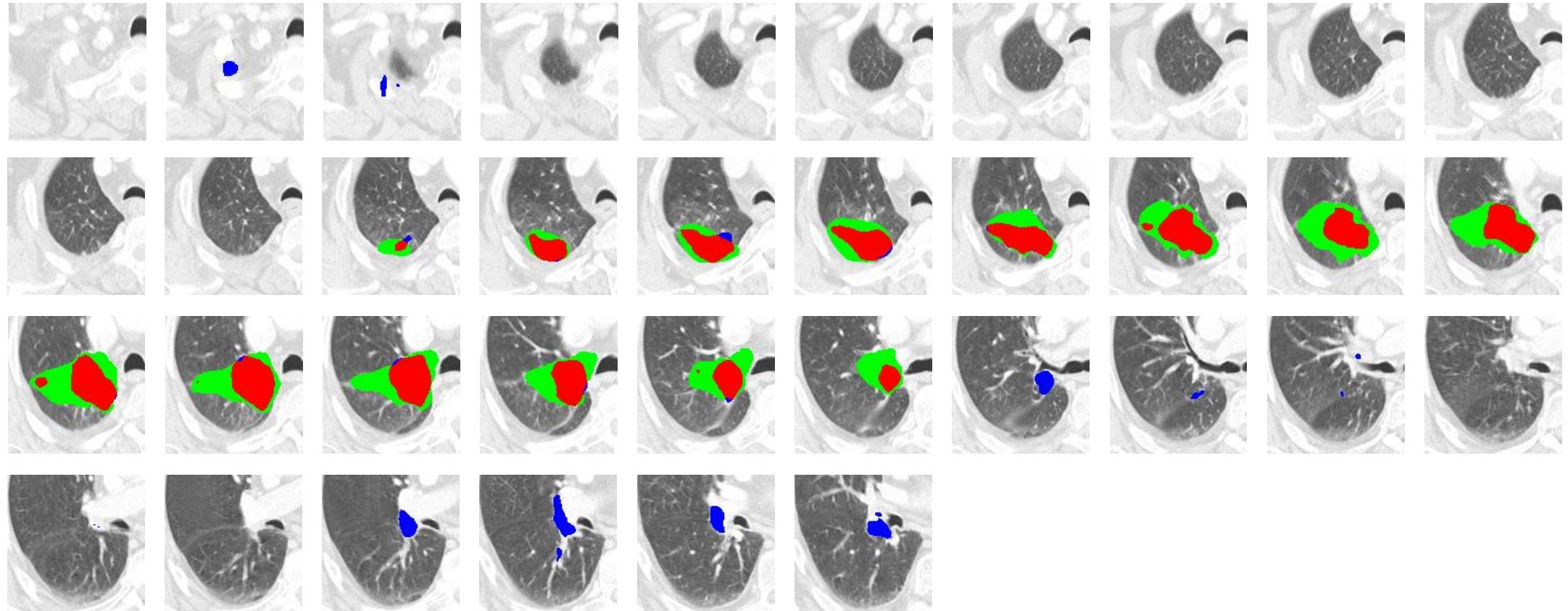
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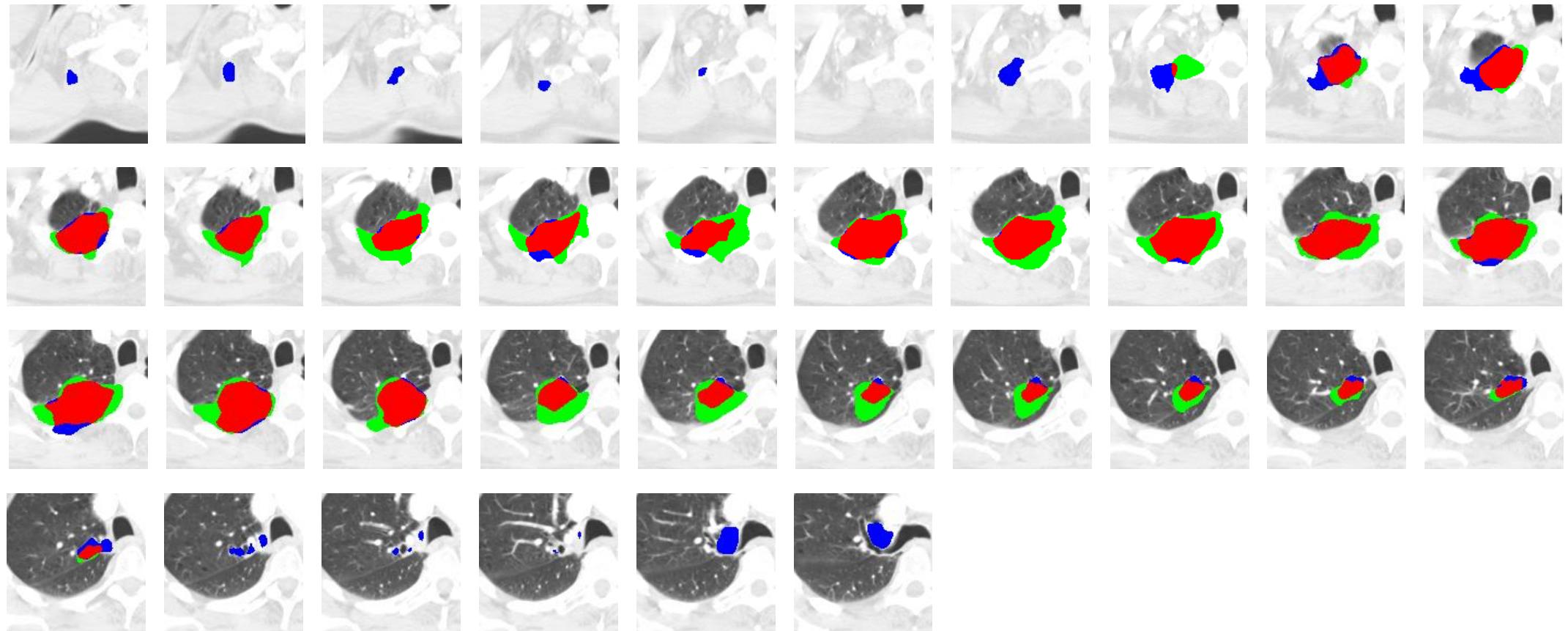
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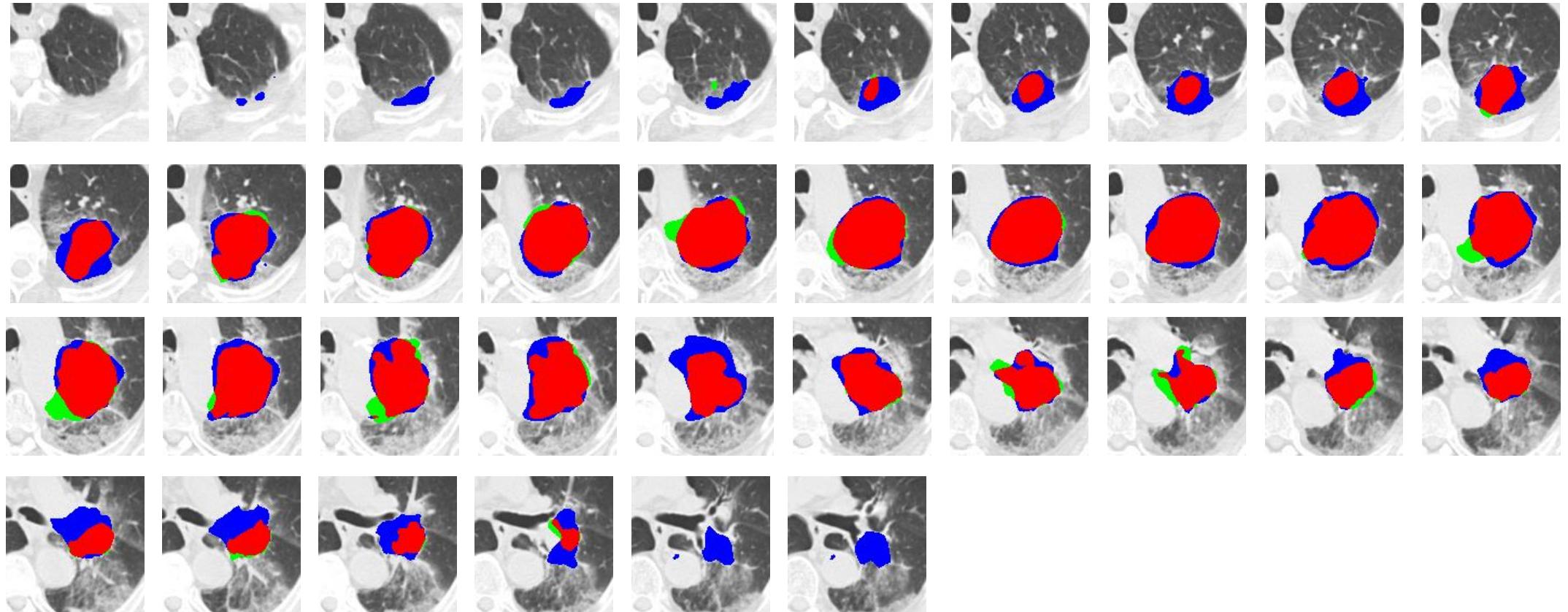
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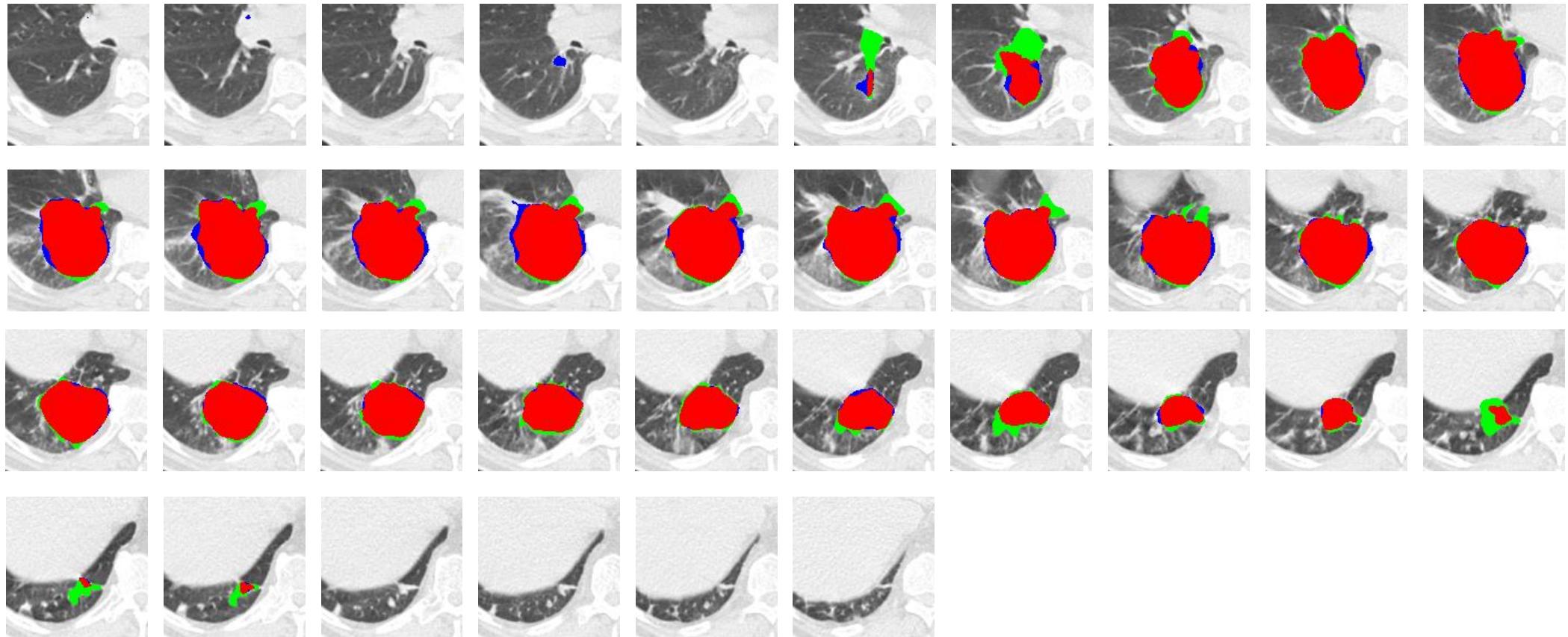
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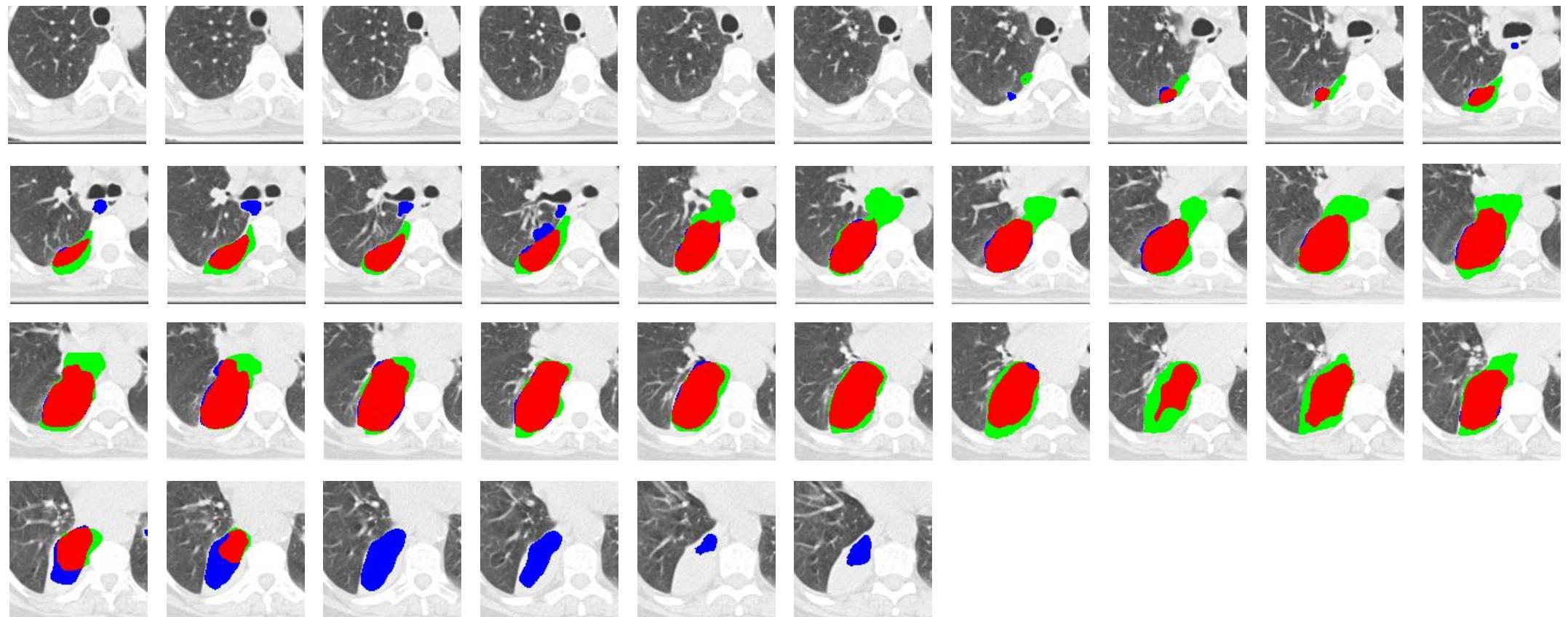
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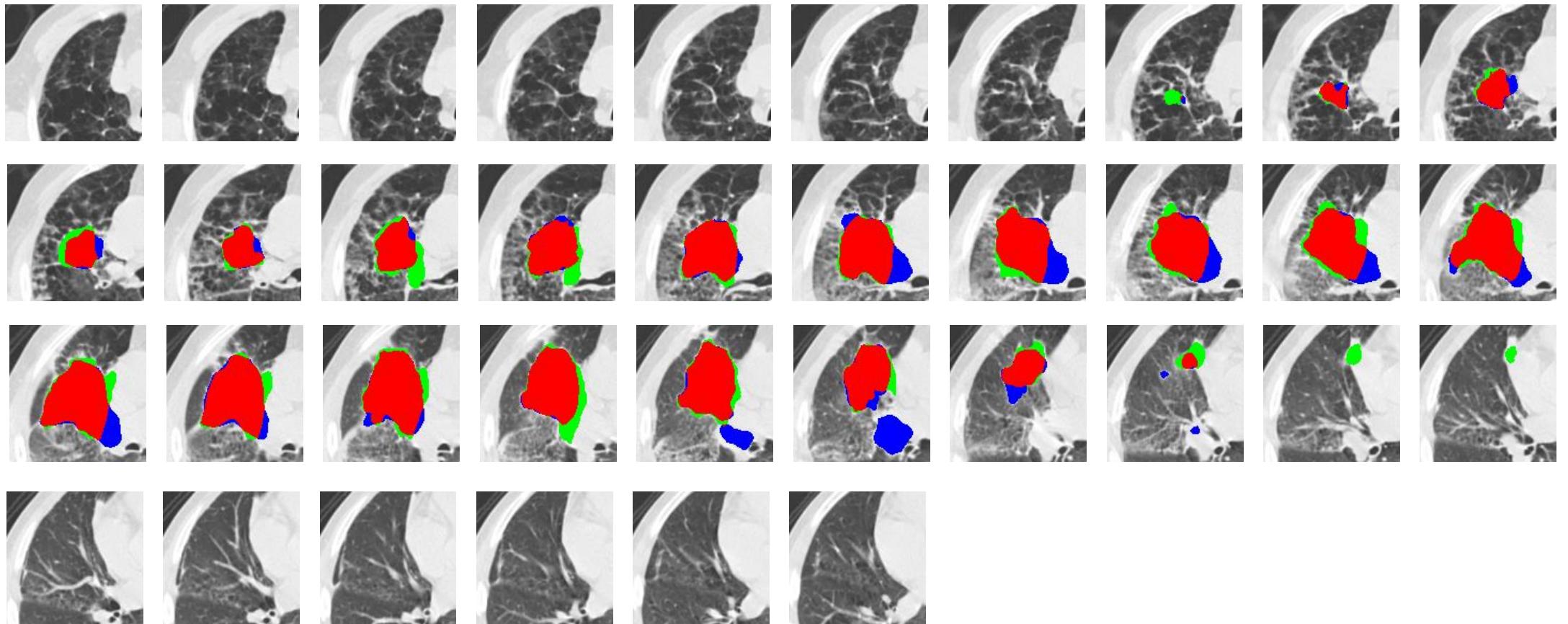
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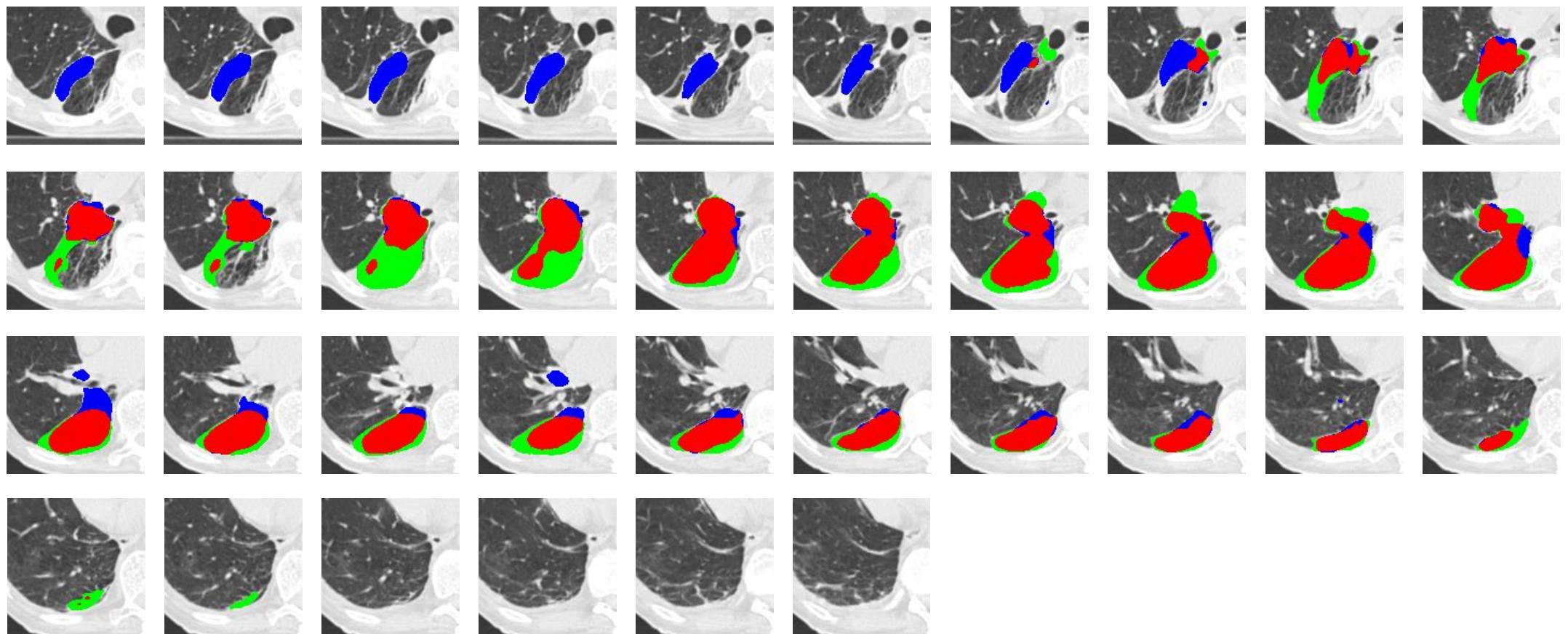
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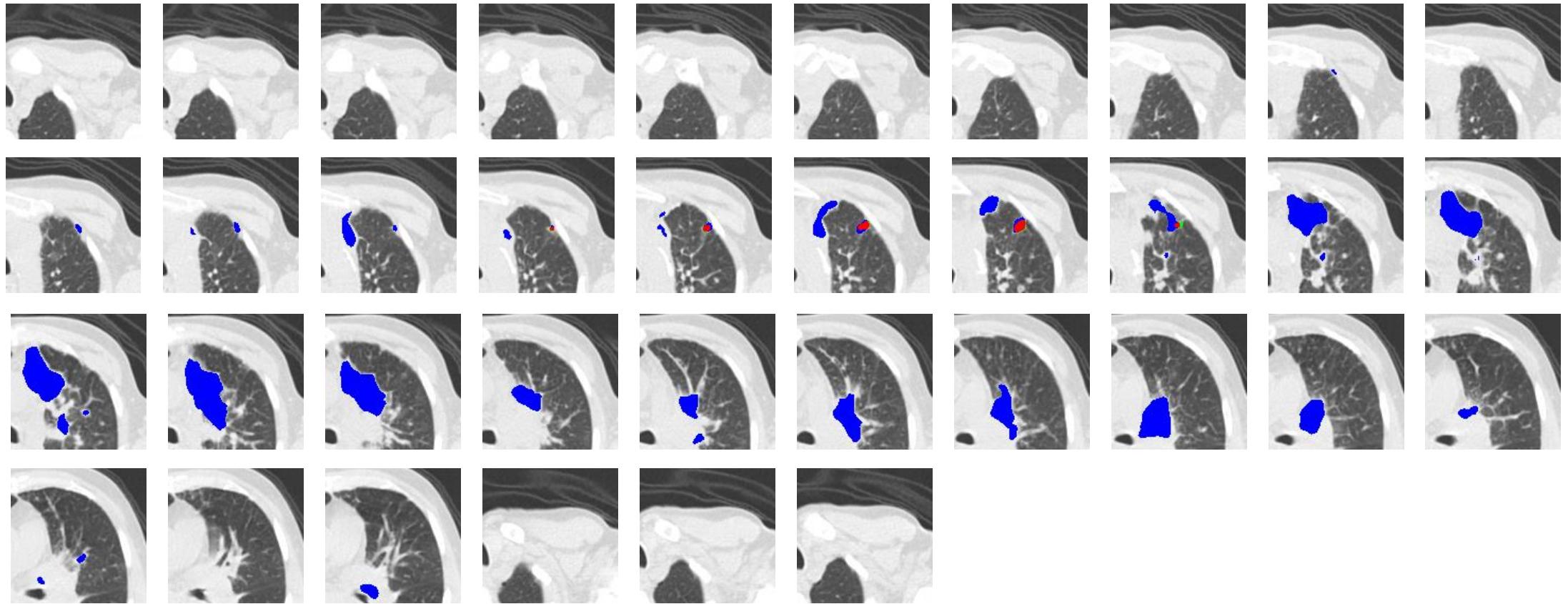


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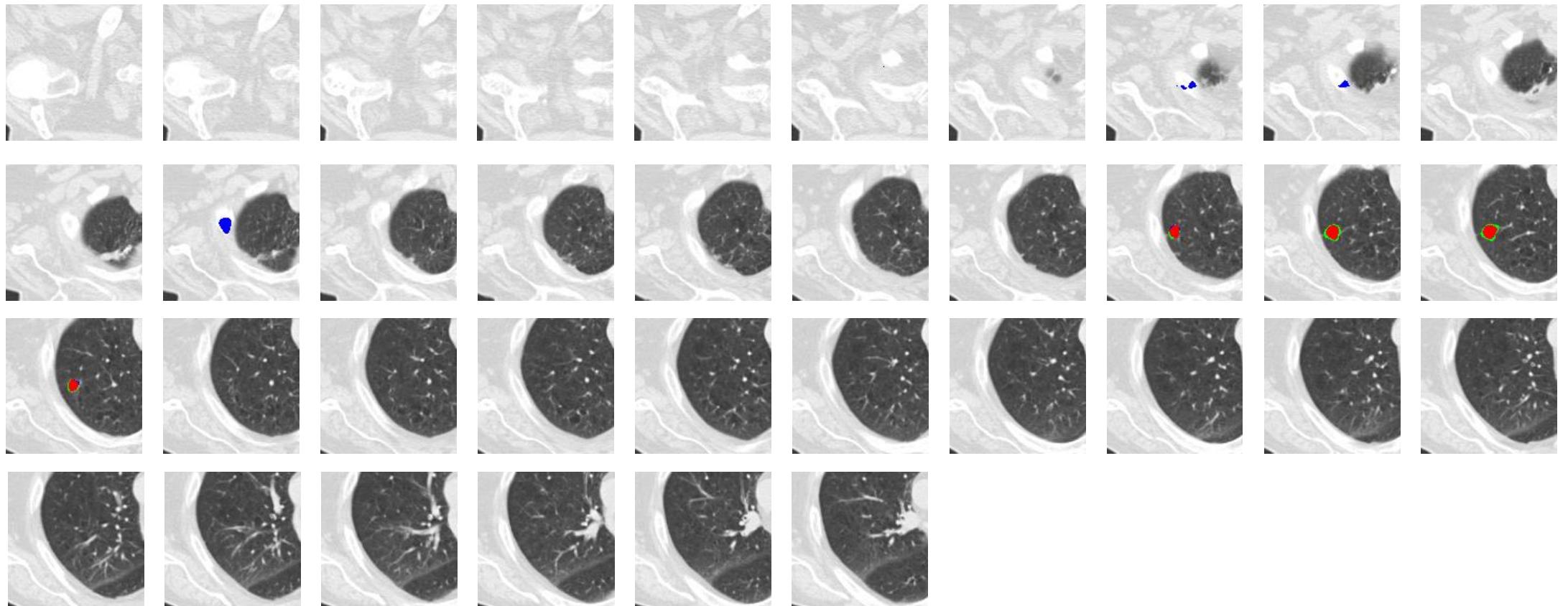


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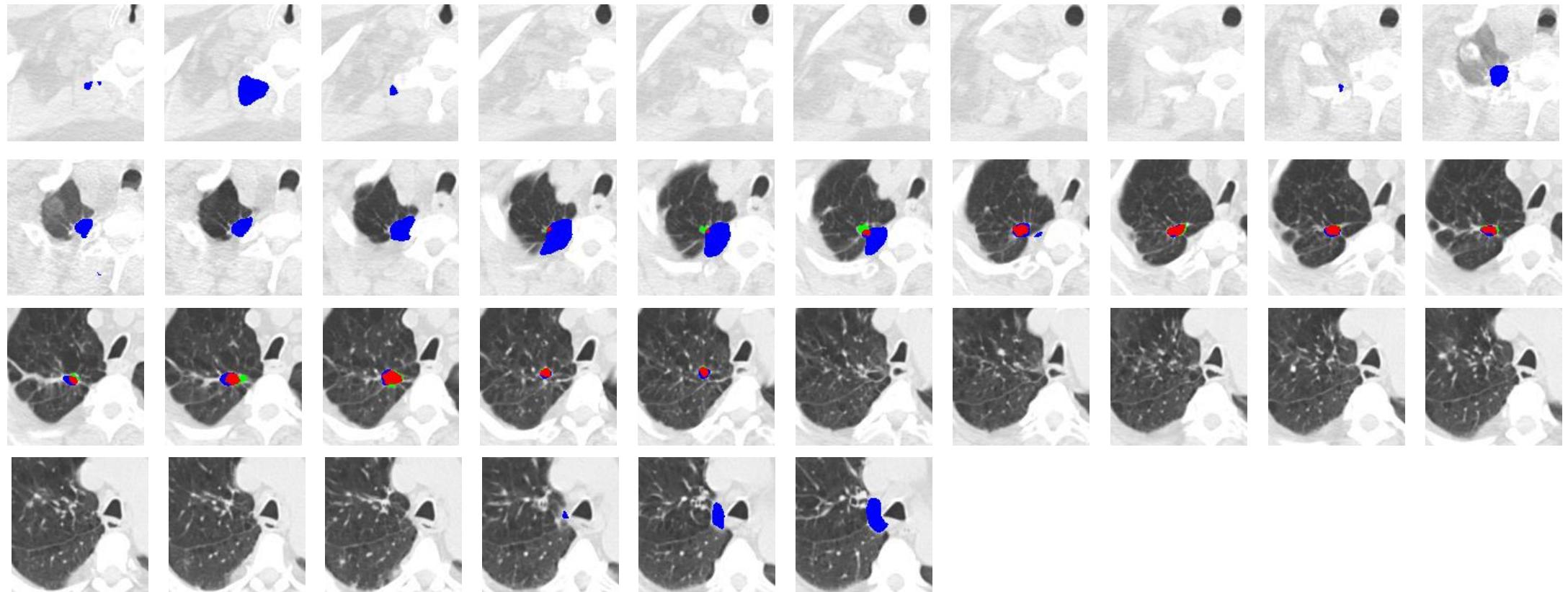
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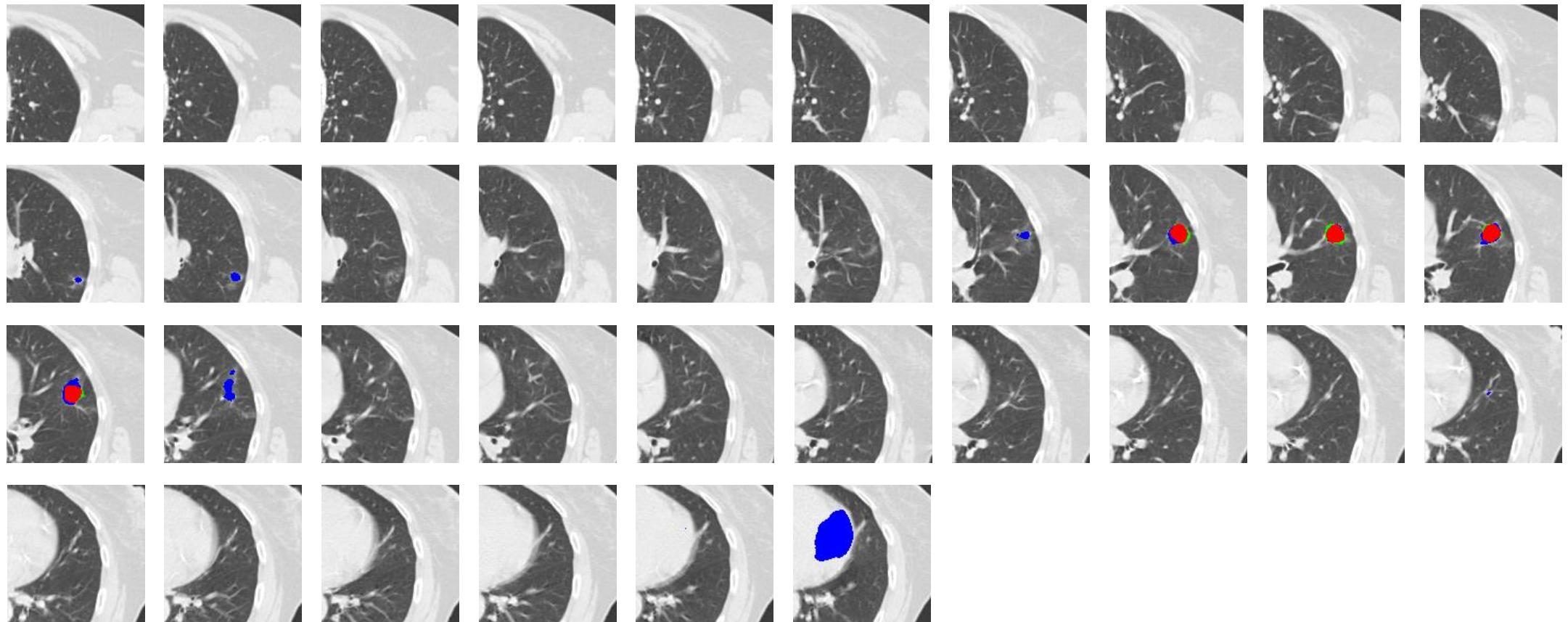
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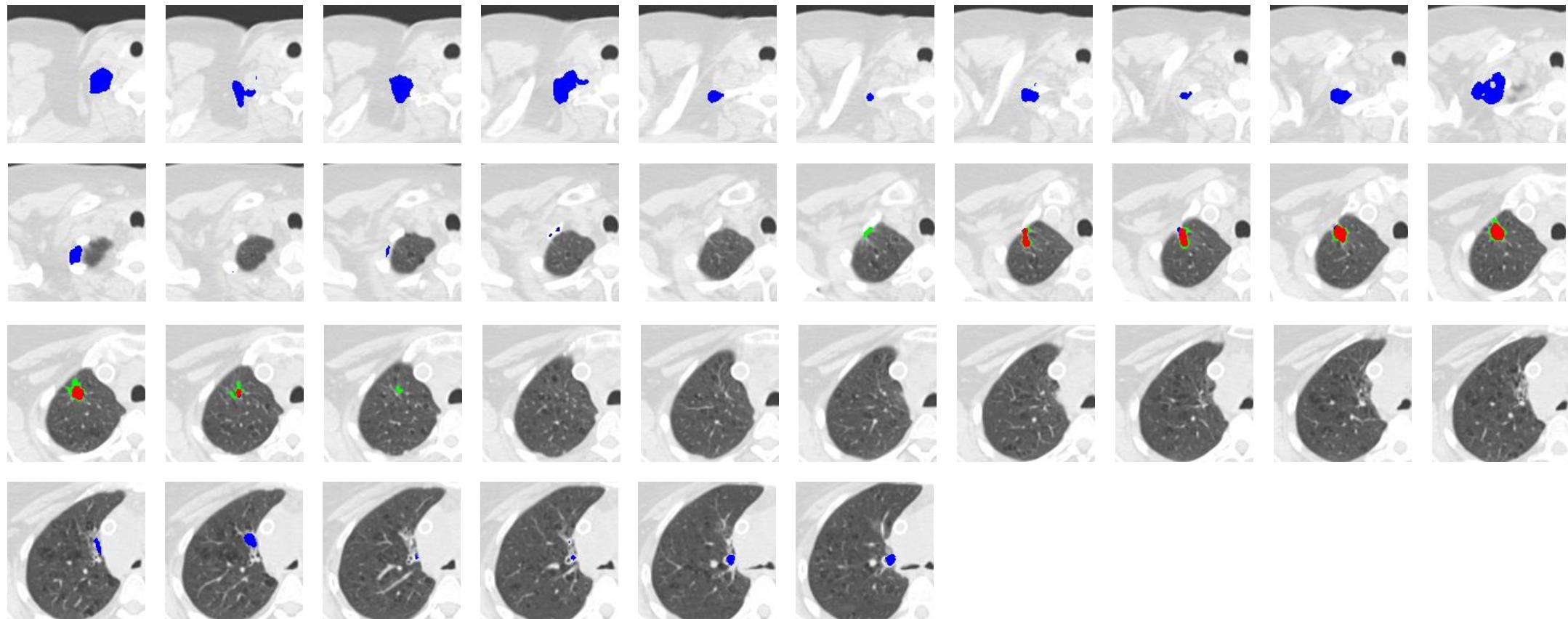
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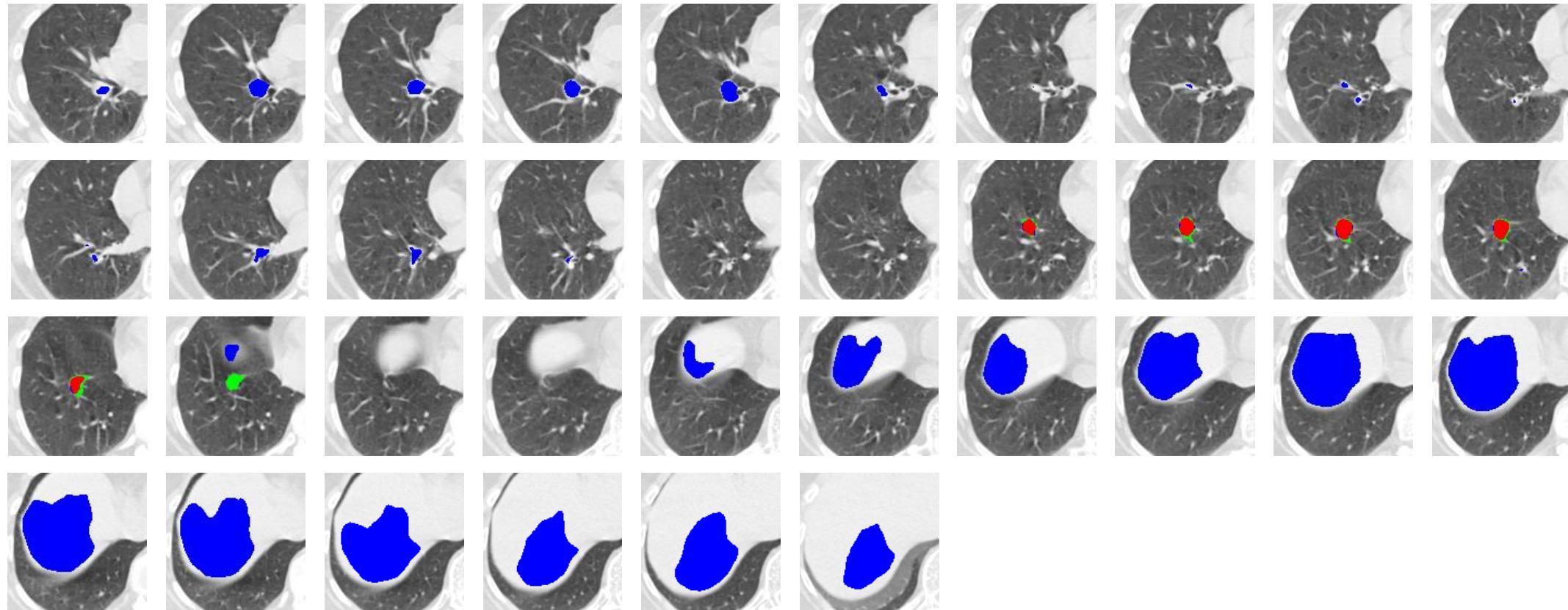
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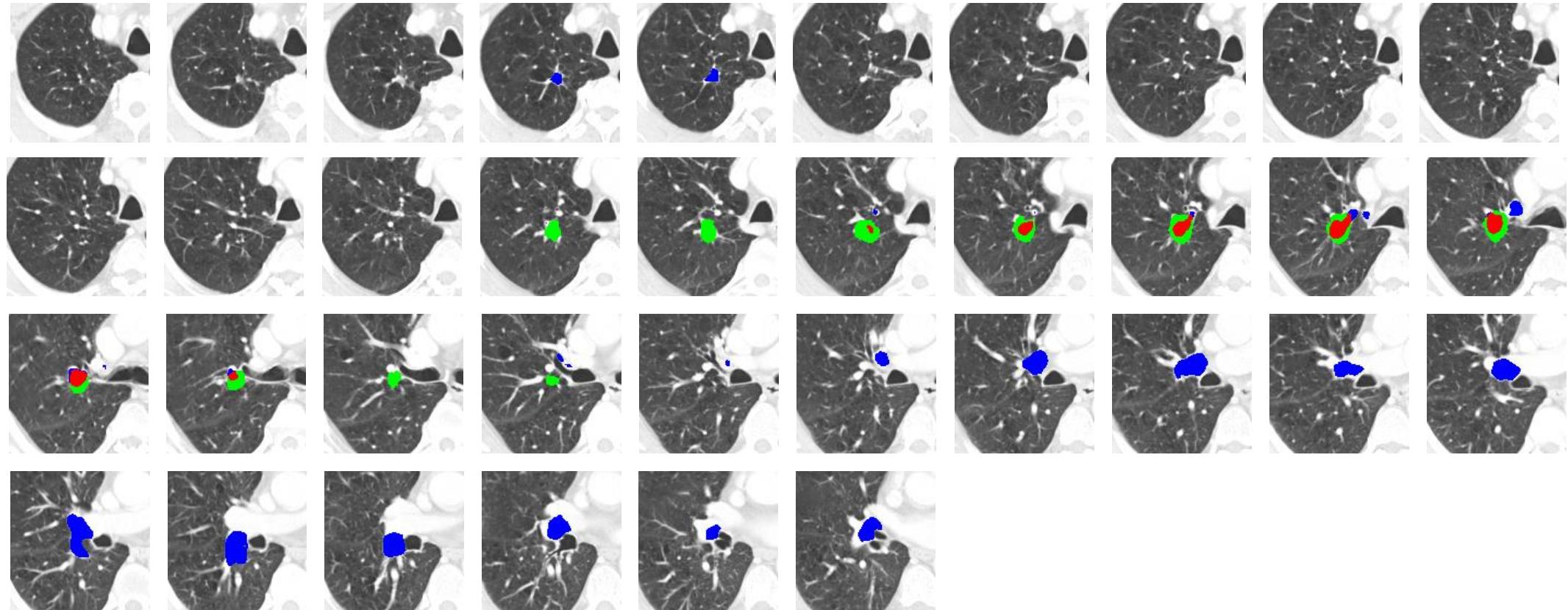
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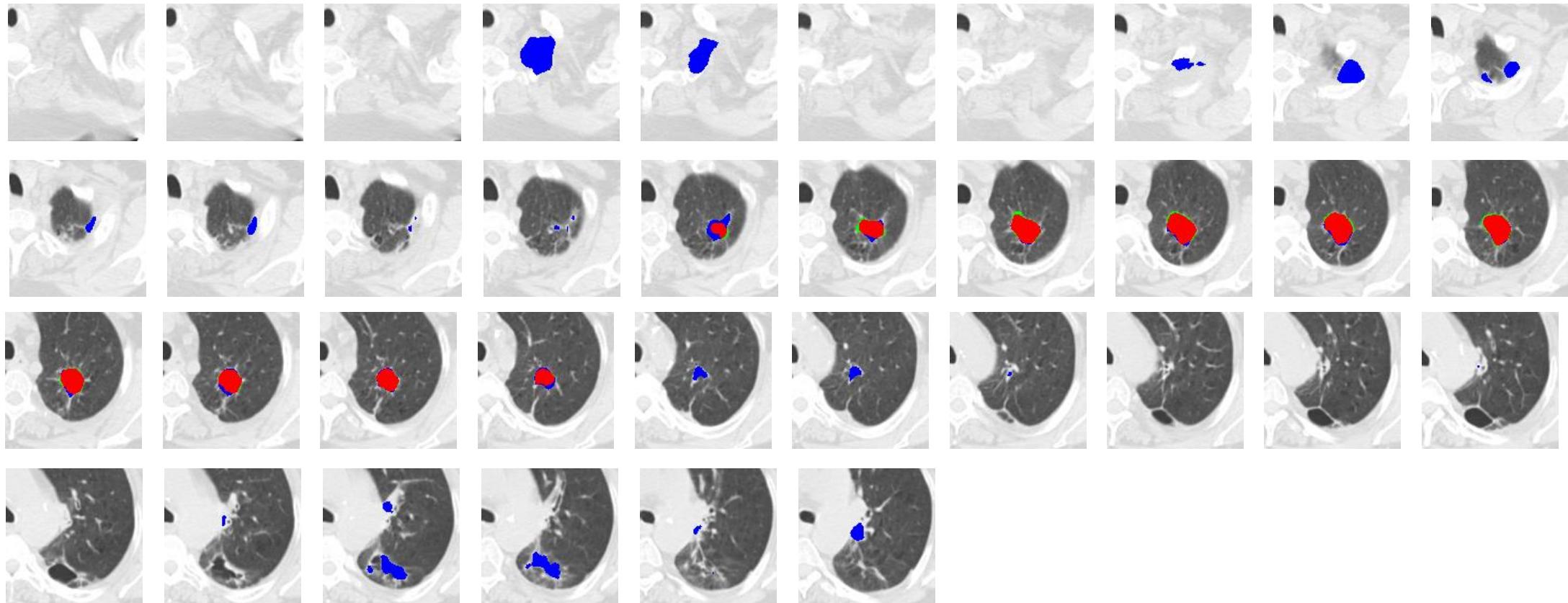
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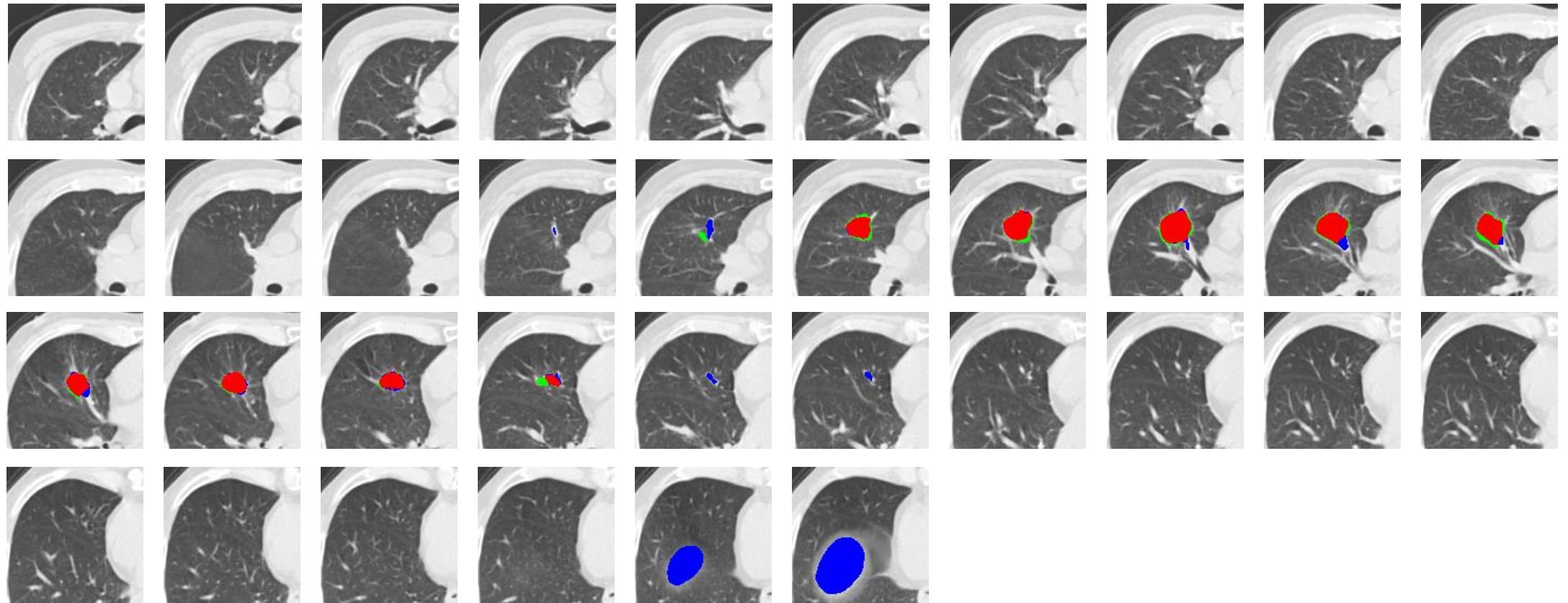
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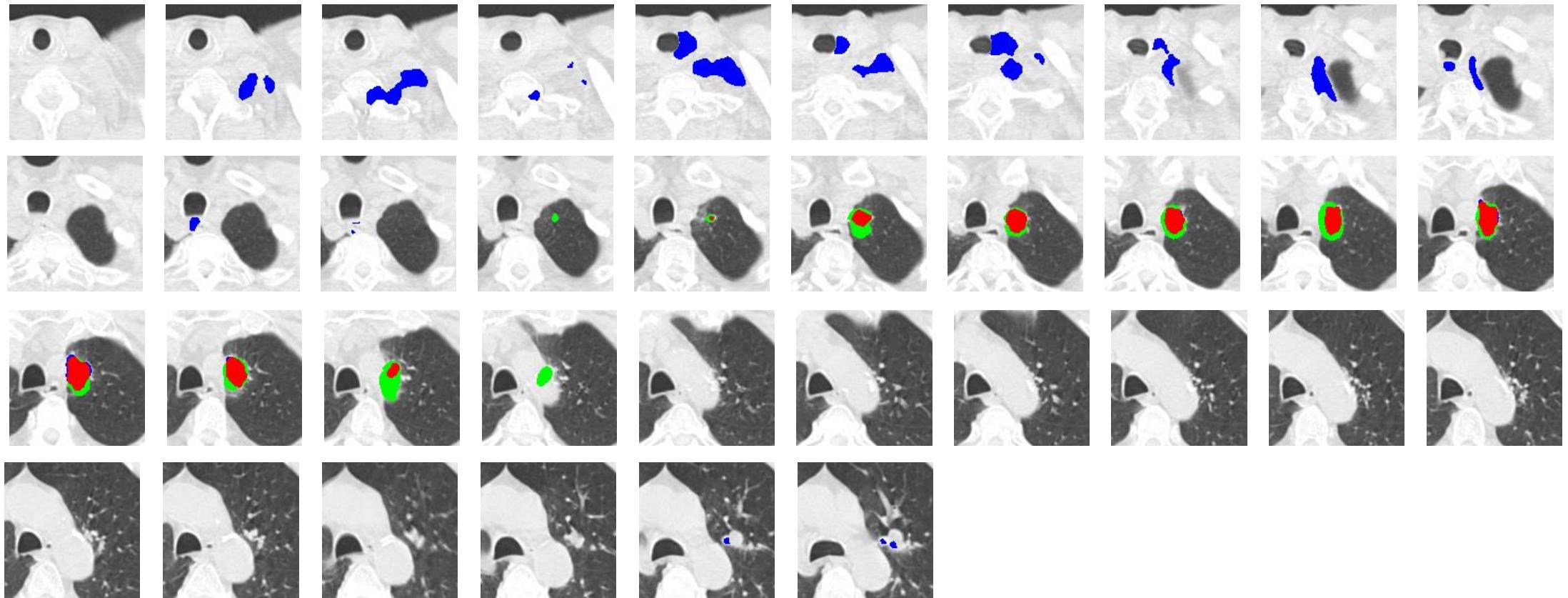
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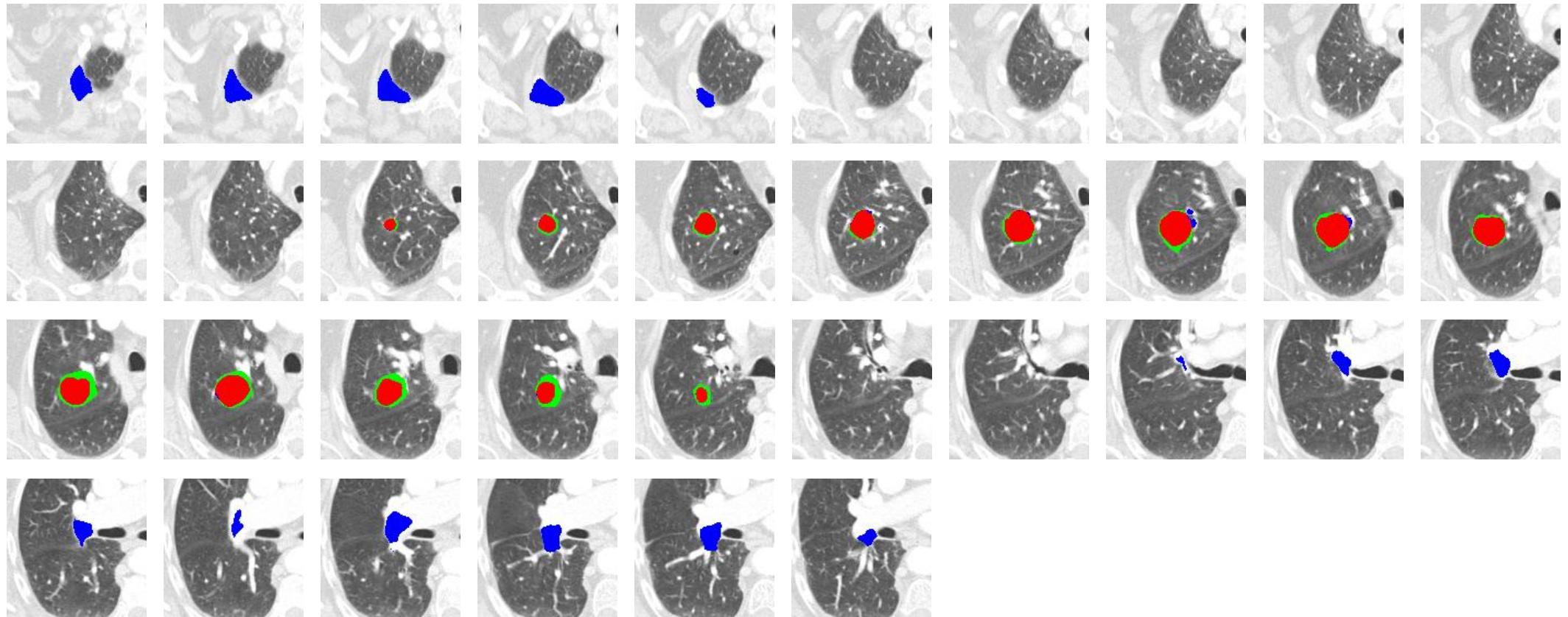
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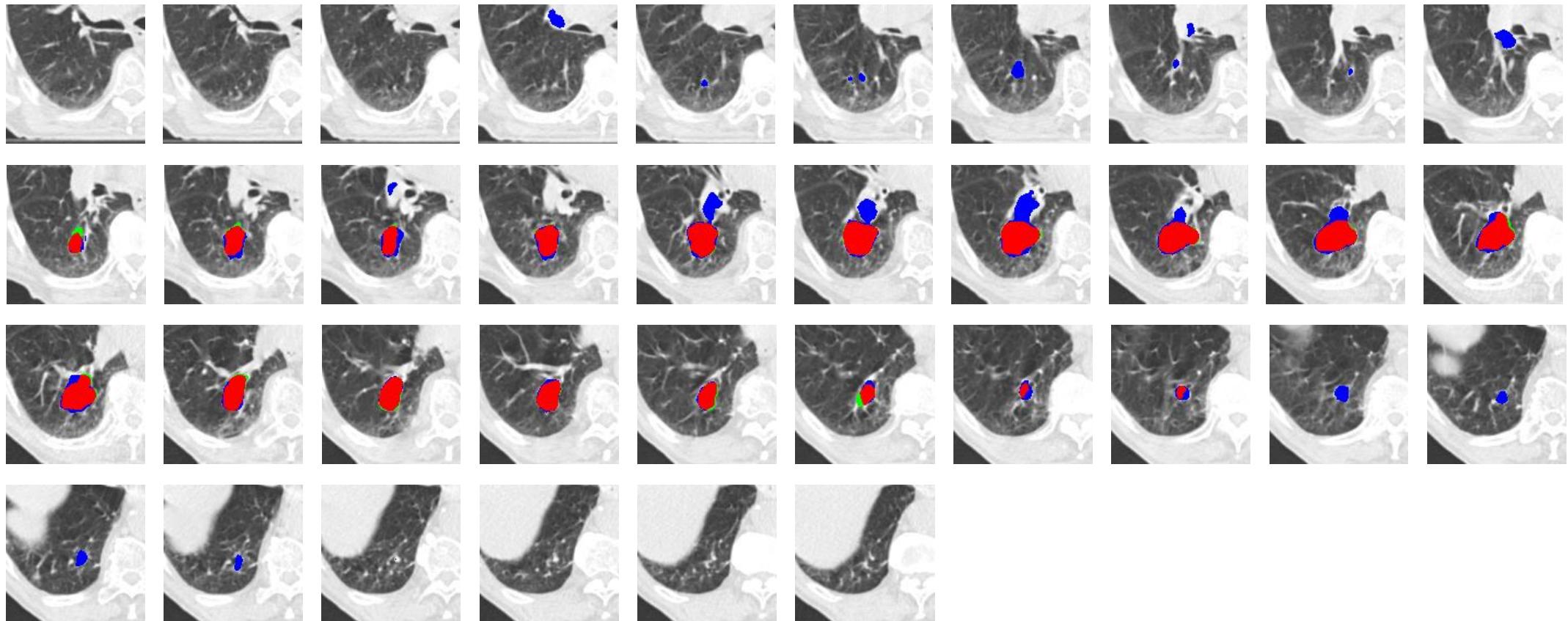
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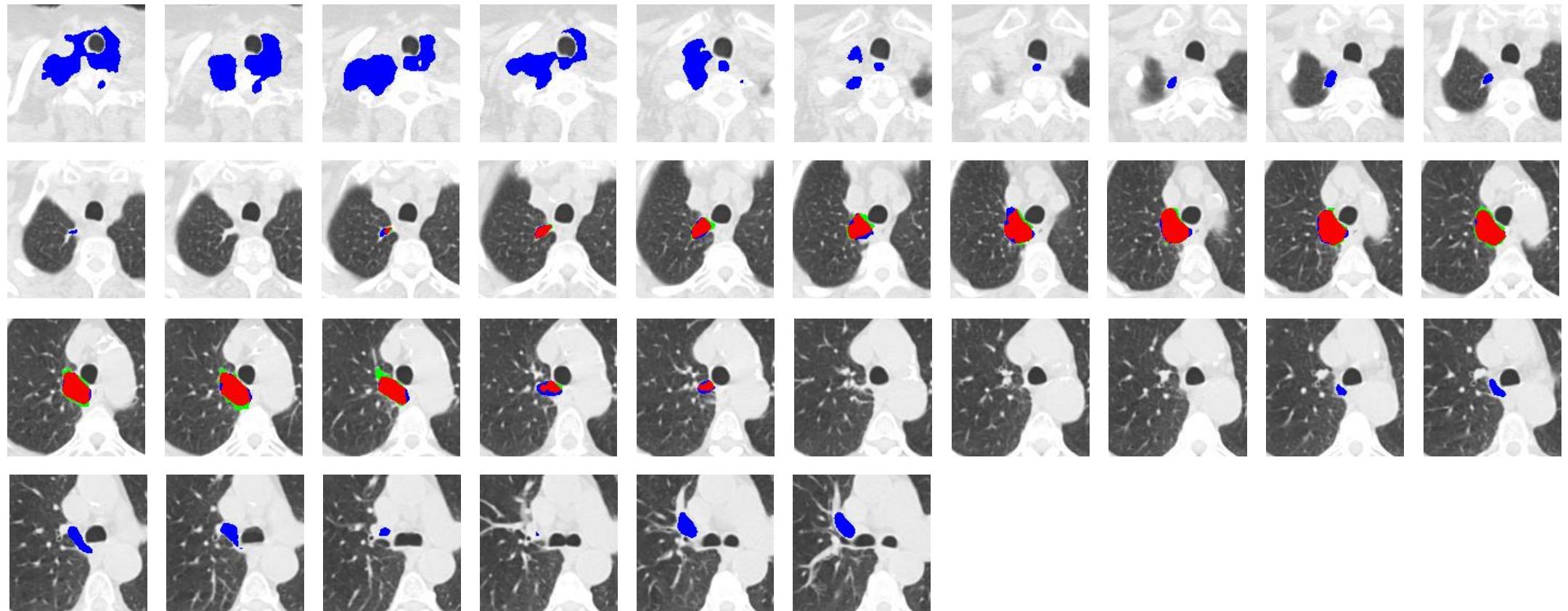
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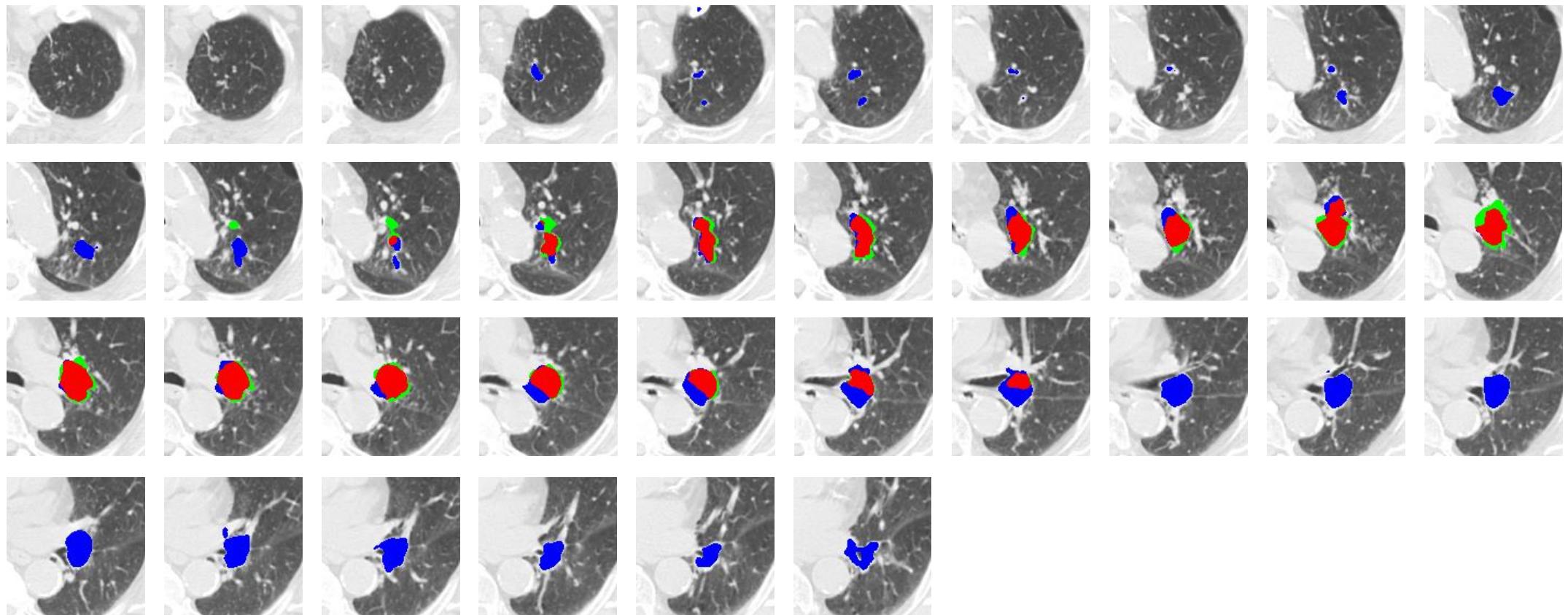
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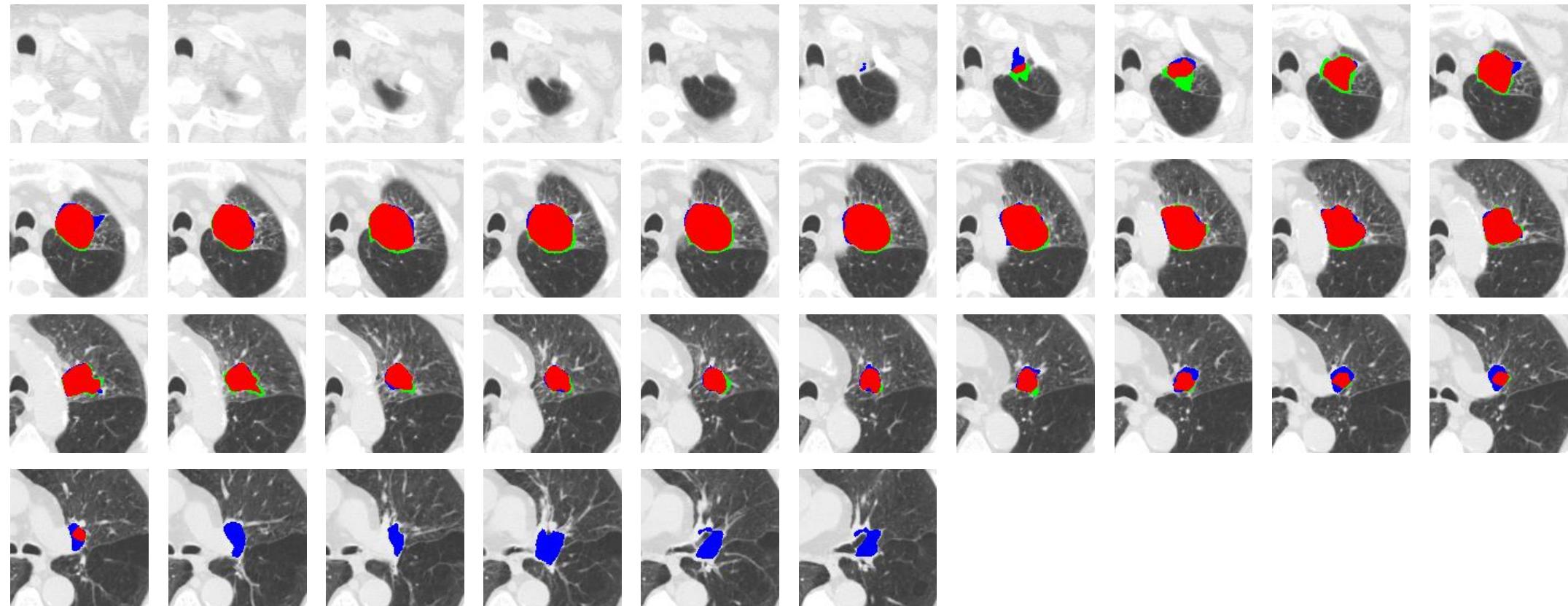
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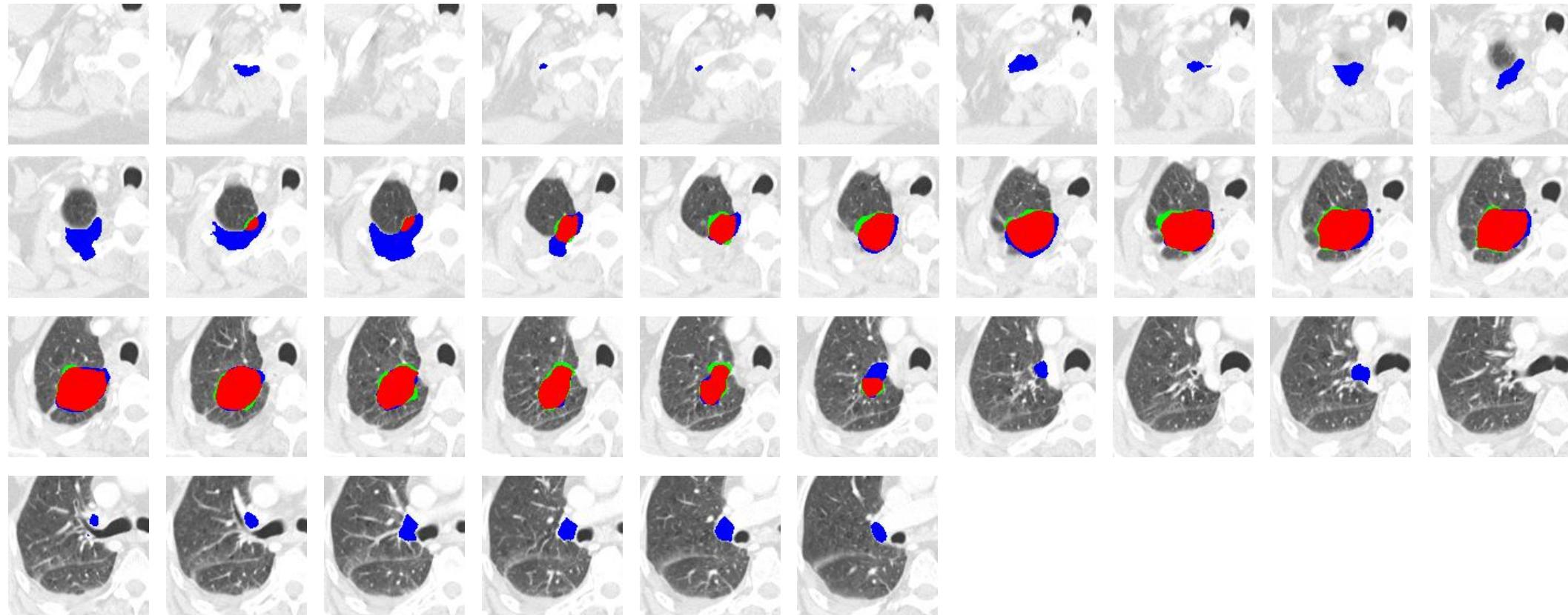


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# fold 3

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# fold 4

# fold 5