

Appendix A: The questionnaire for breast induration (Fibrosis) assessment from the REQUITE study which was modified from CTCAE v. 4.0.

Is there any skin induration (Fibrosis) of the tumour bed?

0 = None

1 = Mild induration, able to move skin parallel to plane (sliding) and perpendicular to skin (pinching up)

2 = Moderate induration, able to slide skin, unable to pinch skin, limiting instrumental activities for daily living (ADL)

3 = Severe induration; unable to slide or pinch skin; affecting activities for daily living; limiting self care ADL

Is there any skin induration (Fibrosis) outside the tumour bed?

0 = None

1 = Mild induration, able to move skin parallel to plane (sliding) and perpendicular to skin (pinching up)

2 = Moderate induration, able to slide skin, unable to pinch skin, limiting instrumental activities for daily living (ADL)

3 = Severe induration; unable to slide or pinch skin; affecting activities for daily living; limiting self care ADL

Appendix B:

Table 1. The volume of breast contour generated from difference contouring approach.

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso95%
1	304.82	401.75	397.78	438.54	209.26	286.95	285.66	313.52	553.57
2	1293.28	1091.38	992.58	1225.55	1087.35	942.80	855.20	1067.58	1740.01
3	475.87	501.28	478.92	536.74	361.99	388.08	376.85	420.23	752.97
4	458.05	655.48	556.11	647.44	350.65	531.53	444.73	527.25	1094.87
5	982.98	713.76	682.72	786.02	786.56	581.81	561.74	644.64	1124.53
6	397.13	360.16	352.62	395.59	273.61	264.36	261.06	293.70	578.12
7	936.39	769.43	716.87	809.38	733.32	642.38	591.98	676.76	1222.77
8	1129.18	647.54	653.26	670.72	912.84	527.49	535.05	546.89	1445.87
9	290.06	320.65	319.89	329.76	181.39	211.65	211.16	212.98	450.48
10	510.10	454.16	467.15	481.42	365.50	345.88	355.69	368.11	582.75
11	734.70	796.48	632.25	861.19	580.61	666.16	529.12	716.97	1038.56
12	485.67	445.90	398.42	435.07	354.16	333.66	299.81	327.51	390.07
13	392.04	472.14	434.12	483.48	315.68	358.83	318.31	366.58	610.12
14	1218.22	949.18	838.10	1103.13	999.09	806.05	704.51	949.73	1361.09
15	1478.01	1230.13	1192.90	1284.84	1234.82	1061.59	1034.31	1115.98	1632.85
16	1145.62	1037.56	914.78	1105.93	962.72	897.51	780.95	953.48	1841.44
17	888.14	766.83	735.65	812.84	739.04	641.01	618.41	677.99	1214.86
18	1706.50	1362.83	1293.47	1389.46	1428.16	1184.87	1123.79	1204.39	2287.43
19	117.06	238.12	218.99	243.06	63.73	133.61	123.27	137.87	188.40
20	1119.46	905.29	862.93	1015.60	911.67	768.64	733.30	880.29	1691.44

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
21	307.38	295.25	283.16	342.31	209.85	216.89	210.08	253.43	583.19
22	852.48	567.88	517.19	609.03	670.53	441.24	406.19	474.08	1085.76
23	909.61	668.17	634.07	720.74	703.12	538.70	519.17	589.58	1069.77
24	1187.33	901.27	839.70	995.17	936.85	763.16	712.33	864.21	1915.10
25	711.87	541.40	491.29	560.05	534.26	425.65	391.70	443.56	595.04
26	433.60	456.58	423.96	470.40	293.36	338.56	319.33	349.20	694.71
27	1496.58	1137.42	935.65	1157.71	1244.59	988.69	800.87	1010.93	2086.69
28	246.59	276.23	263.77	313.09	154.91	176.78	169.42	199.79	272.76
29	791.41	696.65	598.65	714.00	624.87	564.11	492.93	578.73	888.26
30	634.83	483.46	477.59	503.59	446.67	383.80	330.24	374.07	799.89
31	635.06	575.89	564.78	623.16	480.98	464.60	457.63	506.32	923.93
32	491.88	502.25	444.20	503.59	352.19	390.19	341.55	393.04	768.76
33	249.32	279.22	265.78	290.91	152.77	184.00	175.64	191.87	310.81
34	1208.40	913.29	903.73	941.33	1049.74	764.17	761.63	789.58	1105.55
35	1360.54	1103.92	1098.47	1155.56	1130.41	950.79	951.22	1005.38	1800.99
36	516.63	484.02	463.40	508.76	368.84	367.55	356.45	393.93	746.95
37	914.10	787.12	756.23	879.68	725.15	649.81	628.72	732.86	1048.24
38	573.38	544.78	487.90	525.72	431.44	426.77	385.91	413.21	740.19
39	991.91	916.45	924.98	925.88	849.86	760.51	766.64	771.08	952.55
40	736.67	647.85	671.91	710.83	631.93	535.44	556.76	590.65	872.96
41	434.86	444.31	421.26	489.84	302.41	336.52	321.60	377.66	563.62
42	845.67	697.35	721.52	717.61	658.79	564.39	581.12	587.82	907.60
43	171.62	292.68	264.31	287.86	88.14	171.41	149.31	162.65	349.00

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
44	200.58	294.93	290.66	319.14	148.74	184.73	183.15	204.96	280.68
45	478.30	484.42	461.48	482.00	350.40	371.39	357.09	371.79	490.26
46	535.27	568.87	529.87	610.97	392.09	446.94	413.76	481.74	706.33
47	1693.11	1141.42	1071.16	1325.69	1528.85	987.20	933.06	1173.14	2060.19
48	1602.13	1528.74	1393.08	1630.02	1390.43	1345.19	1228.45	1457.56	2143.62
49	784.37	771.93	705.51	875.06	620.89	654.68	589.77	739.53	1221.20
50	788.63	817.71	787.14	805.95	618.75	678.77	640.36	663.08	862.09
51	1036.17	686.52	582.55	680.40	800.09	556.53	481.24	577.78	1120.26
52	501.13	439.33	417.35	489.55	372.03	331.59	320.92	375.53	750.07
53	373.94	457.40	442.00	465.17	261.91	332.59	325.30	354.92	797.10
54	828.71	783.10	727.21	812.59	709.71	637.77	583.86	665.86	1027.65
55	409.57	455.12	430.20	484.63	325.11	338.92	320.55	367.84	521.53
56	273.29	295.25	266.52	321.83	204.49	196.99	177.88	202.51	341.32
57	847.63	525.27	479.67	558.44	646.05	426.42	393.93	460.00	863.44
58	909.47	611.32	655.25	701.43	724.44	548.42	543.65	576.59	800.67
59	1556.00	644.61	720.99	1036.22	1274.06	509.80	605.47	858.60	1744.92
60	642.26	531.99	475.36	562.93	475.48	423.08	373.81	455.88	613.75
61	2151.97	1261.15	1520.72	1666.39	1857.32	1113.10	1349.15	1476.66	2266.99
62	713.26	598.10	593.55	590.48	541.06	474.24	474.77	471.21	870.39
63	150.64	213.66	203.31	225.84	84.64	111.20	105.31	112.43	226.65
64	489.86	416.46	402.27	462.48	345.68	318.47	307.90	359.01	604.90
65	781.98	540.82	460.18	576.92	584.57	420.31	361.22	453.65	939.50
66	262.12	297.33	282.70	309.96	157.52	188.25	182.98	191.06	349.61

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
67	792.33	689.98	650.14	737.91	603.64	563.03	530.25	601.38	924.59
68	253.81	284.06	268.86	291.12	155.31	174.77	170.41	181.39	384.10
69	756.48	621.15	618.05	704.67	561.21	501.04	495.25	567.30	739.93
70	971.18	678.41	596.35	777.96	777.42	545.35	480.31	638.00	1146.85
71	1175.47	918.54	937.09	990.45	950.34	781.96	793.25	852.21	1353.73
72	932.40	709.73	687.25	725.06	730.18	582.97	562.48	596.51	1294.96
73	493.39	473.78	474.34	547.56	348.27	340.73	356.45	419.79	750.50
74	856.50	778.09	742.75	768.53	664.34	629.27	596.08	622.54	1006.63
75	542.03	396.79	373.24	414.04	378.47	292.60	297.81	311.31	663.72
76	555.81	561.26	536.56	598.46	382.74	427.78	412.10	456.16	646.35
77	1203.31	827.77	772.67	874.86	953.81	694.42	645.75	737.97	1261.89
78	1475.75	1281.35	1283.16	1275.07	1228.22	1100.30	1106.75	1103.11	1312.81
79	957.02	678.55	586.23	760.50	760.91	554.50	475.67	631.75	874.43
80	1378.50	1168.84	1252.14	1355.73	1160.13	1016.93	1093.96	1183.64	2050.43
81	637.39	573.69	546.26	608.41	472.28	450.76	431.64	478.92	726.32
82	1518.30	933.89	968.81	1074.09	1236.89	782.86	815.77	918.38	1496.71
83	237.73	279.03	268.42	293.25	181.27	177.89	175.15	189.76	317.59
84	248.01	351.64	331.15	395.77	156.25	238.68	255.62	271.68	229.86
85	881.03	702.07	669.18	738.46	686.91	577.33	556.89	609.92	925.57
86	554.93	460.83	417.50	478.32	390.69	374.70	318.52	374.83	642.32
87	1375.80	1201.34	1125.21	1282.20	1125.22	1044.94	987.46	1115.81	1731.50
88	342.36	338.06	333.52	399.14	220.36	223.05	227.24	278.71	465.42
89	225.19	315.44	307.59	324.50	139.73	203.17	198.31	204.02	297.64

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
90	358.39	445.32	407.50	456.41	234.28	331.15	298.87	347.35	445.11
91	1058.29	945.63	941.52	990.17	850.33	801.70	799.45	841.64	1444.10
92	365.87	411.29	369.00	440.01	238.47	305.80	274.72	330.46	490.53
93	306.23	358.10	356.76	375.76	198.83	247.30	248.70	252.67	341.66
94	1916.49	1365.50	1294.86	1412.14	1627.71	1195.40	1143.19	1243.65	1845.70
95	239.27	244.05	233.33	257.36	141.36	139.40	133.70	146.59	331.58
96	603.69	498.10	474.21	530.57	429.55	377.68	362.67	418.56	750.59
97	236.21	269.21	249.48	269.02	141.88	178.22	165.95	177.69	356.86
98	763.80	514.61	506.21	617.70	591.98	402.88	401.49	505.03	762.09
99	908.11	712.08	687.28	750.83	717.52	594.30	578.09	630.37	878.19
100	811.80	598.58	567.86	653.90	624.44	461.85	441.80	503.29	879.03
101	646.30	545.11	460.88	577.09	473.37	426.18	364.01	437.34	606.67
102	705.35	660.58	564.96	728.44	535.26	523.13	456.83	598.32	783.69
103	907.49	571.45	523.97	625.47	711.49	448.12	418.25	498.23	946.95
104	818.17	617.25	573.38	643.66	703.03	502.55	450.72	521.07	1004.09
105	627.08	452.74	421.03	451.96	436.18	341.96	315.89	342.92	621.35
106	445.08	450.21	417.94	427.94	319.25	332.06	310.73	318.23	372.00
107	658.32	524.06	493.41	549.30	495.29	415.58	393.80	438.46	837.49
108	894.75	758.55	705.92	830.86	716.50	638.47	590.37	704.43	1176.84
109	269.21	308.47	284.09	318.44	196.21	201.43	189.39	214.13	277.02
110	181.07	262.14	241.46	273.46	103.25	161.46	149.15	165.90	359.72
111	821.90	635.86	563.40	681.48	627.88	514.25	447.34	547.27	838.04
112	655.35	422.53	513.91	488.70	474.67	293.56	376.14	349.96	775.90

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
113	279.91	322.13	328.37	354.83	189.93	227.91	231.09	252.55	353.73
114	969.29	600.22	548.57	659.97	773.01	483.94	440.24	529.46	888.96
115	1154.24	727.54	479.00	887.15	953.51	608.43	393.95	756.50	1099.79
116	1041.25	764.37	792.48	846.88	838.03	631.28	657.39	712.72	1230.60
117	749.57	612.07	581.45	654.39	554.62	485.94	458.17	520.39	1036.92
118	1378.50	885.92	741.47	882.92	1122.39	748.99	625.86	757.67	1655.07
119	628.54	510.09	480.34	560.83	472.81	395.40	376.89	451.86	704.83
120	807.79	621.86	532.02	668.39	615.11	497.71	430.80	537.61	894.65
121	664.98	536.53	482.98	570.72	511.98	422.48	375.97	447.53	590.49
122	1580.18	986.78	954.47	1021.92	1309.58	835.74	809.87	866.56	1603.94
123	997.73	689.26	689.22	702.31	826.15	572.07	573.95	584.92	1122.51
124	276.29	370.07	359.62	388.68	190.01	267.84	260.46	281.96	349.49
125	713.73	562.30	545.06	588.99	535.32	431.98	426.65	462.69	736.86
126	1043.62	875.64	817.35	885.80	824.91	719.93	673.53	742.72	995.52
127	252.81	350.86	320.09	387.66	144.63	236.36	207.72	269.03	416.07
128	1467.98	901.39	960.51	1172.53	1209.56	753.98	826.93	1006.06	1528.89
129	616.85	549.78	481.27	576.47	445.13	432.42	371.72	453.16	538.56
130	1223.84	914.82	879.01	958.58	1003.07	780.29	752.00	818.35	1526.05
131	784.45	607.72	609.44	684.71	598.05	483.30	489.68	551.96	773.63
132	166.77	234.34	198.81	237.22	96.17	148.81	123.79	146.97	254.81
133	781.76	633.36	619.83	674.87	605.26	521.42	512.55	559.62	1158.72
134	470.22	402.33	358.37	428.82	316.70	306.20	269.92	321.00	317.38
135	424.36	412.28	374.22	428.25	279.12	296.45	261.95	305.31	458.27

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
136	1446.30	1072.30	1101.21	1158.49	1148.19	931.24	956.90	1005.62	1516.07
137	577.17	474.68	450.01	482.52	412.16	368.11	349.00	371.78	470.12
138	1167.57	711.34	626.84	769.19	912.65	593.47	524.63	638.25	985.52
139	306.38	344.58	305.67	352.71	193.60	240.36	214.23	243.95	419.28
140	611.71	535.41	527.72	552.52	438.51	415.81	410.06	431.92	743.44
141	1400.82	758.18	726.41	1030.28	1144.33	641.69	586.05	872.88	1673.78
142	440.00	375.40	360.93	425.94	282.63	260.35	257.10	310.84	690.22
143	488.16	471.31	457.46	486.05	355.58	349.58	348.62	369.52	645.18
144	1437.88	1001.25	985.55	1040.94	1177.07	853.40	845.55	904.55	1365.51
145	810.37	732.35	710.41	795.39	643.43	600.12	584.84	658.24	1103.30
146	308.40	331.42	306.37	346.68	192.73	222.52	207.68	233.58	412.15
147	271.10	295.54	268.41	311.40	170.74	202.19	186.62	215.96	338.02
148	596.09	407.27	361.19	415.73	409.81	302.17	269.49	312.50	677.77
149	800.74	692.93	651.81	704.78	582.09	552.91	526.26	567.20	726.85
150	1031.24	707.85	696.84	571.32	810.94	585.00	576.22	620.18	893.58
151	608.19	470.13	458.39	496.26	433.37	359.32	353.11	383.63	545.29
152	1499.92	1056.72	1038.25	1148.93	1243.31	914.45	903.66	1009.02	1781.40
153	1500.54	1059.18	979.61	1141.21	1251.12	911.90	839.69	990.62	1504.05
154	951.44	658.54	574.28	760.72	740.98	521.64	466.09	618.60	1144.17
155	1093.19	687.57	689.21	818.40	876.57	568.22	574.13	677.44	1005.20
156	1009.74	711.55	787.20	833.56	785.86	637.31	650.51	694.27	1279.15
157	699.19	609.38	585.95	643.59	520.47	489.36	471.65	514.58	786.26
158	740.63	623.13	559.59	672.14	548.49	492.07	436.38	521.49	898.77

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
159	1164.41	850.48	858.80	907.70	944.73	705.85	717.60	771.05	1202.48
160	1155.81	937.07	898.89	968.22	935.68	789.59	762.55	824.34	1328.65
161	631.51	677.66	602.41	655.32	474.66	532.03	477.33	521.82	678.87
162	924.52	676.89	630.18	689.37	715.25	541.42	505.91	565.97	880.57
163	662.74	560.85	547.32	602.05	487.44	441.61	424.36	482.31	636.49
164	597.94	644.40	620.06	647.62	448.66	512.23	484.86	519.83	655.34
165	273.49	309.18	298.41	342.16	173.03	210.02	203.82	231.11	357.71
166	285.96	292.39	281.20	301.00	178.44	185.64	179.26	191.53	317.95
167	813.71	588.03	570.82	654.17	614.69	478.68	464.59	545.89	939.20
168	991.39	825.60	795.26	846.10	777.60	688.01	667.24	706.58	918.92
169	1186.29	840.85	797.45	882.91	959.53	709.67	675.45	746.46	1358.21
170	726.52	538.98	522.28	573.03	564.13	427.75	413.49	454.26	723.42
171	509.62	432.70	382.21	470.44	349.44	325.27	292.61	366.33	492.71
172	606.34	550.35	492.56	559.17	447.42	427.95	386.93	440.33	750.58
173	1880.55	1275.38	1151.26	1235.39	1586.67	1092.34	993.14	1059.33	2567.16
174	656.39	602.43	542.76	612.84	523.18	489.90	435.17	502.72	768.86
175	2055.31	1596.67	1743.56	1785.43	1772.31	1405.47	1562.43	1601.48	1956.30
176	991.52	758.47	720.69	835.09	768.68	610.31	588.10	684.72	1197.59
177	609.26	529.75	503.67	546.25	483.92	410.17	384.93	426.79	909.45
178	893.58	807.14	767.28	839.95	690.71	672.48	627.40	704.27	1156.21
179	1289.54	1127.94	1103.88	1168.42	1064.54	969.17	953.41	1025.86	1472.28
180	663.86	628.73	598.74	666.12	527.85	515.76	486.30	551.67	743.25
181	1346.13	722.23	630.15	990.02	1105.56	593.15	518.82	845.84	1822.82

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
182	785.28	490.04	466.28	535.32	591.44	373.48	359.67	413.35	700.40
183	458.44	430.83	439.70	483.21	328.79	318.23	323.73	353.36	599.79
184	732.50	598.44	607.51	620.52	597.29	476.85	495.75	509.00	828.52
185	803.44	616.45	573.09	646.31	637.48	498.10	454.21	524.68	842.63
186	811.49	700.89	672.85	778.38	635.83	588.93	558.67	652.38	1053.70
187	1173.81	851.10	817.61	916.80	964.22	720.65	690.46	770.89	1176.91
188	991.44	701.88	647.73	729.95	786.64	576.55	529.33	599.63	938.64
189	192.22	288.20	271.11	283.39	123.75	191.54	181.50	188.49	256.84
190	1374.82	1019.99	1079.61	1124.96	1121.75	871.83	937.74	976.65	1167.55
191	704.04	591.56	539.40	625.38	527.09	470.10	426.40	493.86	1094.84
192	362.81	432.23	393.22	445.01	258.63	308.44	288.93	321.14	464.24
193	977.93	777.13	770.70	889.77	771.74	657.75	647.08	747.39	1145.70
194	934.24	697.55	699.16	754.25	733.41	570.92	573.88	621.87	1193.43
195	1466.64	883.06	777.03	1368.70	1218.17	759.58	651.00	1185.32	1870.79
196	300.18	324.52	315.78	345.06	197.96	214.78	214.17	231.64	370.71
197	1440.04	1226.77	1041.75	1303.15	1192.69	1071.84	917.37	1139.73	1539.45
198	1003.41	672.28	676.28	771.39	797.33	534.35	555.10	634.97	1022.75
199	2151.31	1581.10	1670.85	1714.31	1822.04	1419.92	1502.30	1540.10	2055.03
200	849.05	746.83	631.26	813.65	666.50	611.85	514.81	678.21	922.03
201	569.51	602.49	565.85	635.23	445.40	477.94	460.56	518.35	838.44
202	1124.38	857.55	869.46	924.48	910.16	721.05	729.91	777.26	1422.07
203	1147.02	664.92	542.00	828.02	914.58	541.55	445.60	684.01	1334.31
204	213.75	263.28	247.10	275.27	123.36	173.03	164.42	183.50	293.04

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
205	173.86	282.53	274.20	294.99	99.01	168.42	164.40	180.05	258.44
206	383.73	400.96	393.27	421.74	258.01	300.94	295.23	318.10	516.25
207	1045.64	700.33	697.53	755.74	833.47	575.86	575.43	625.36	998.24
208	628.55	525.12	467.63	540.73	473.63	411.11	365.81	424.60	629.01
209	1909.25	1091.10	1078.38	1297.64	1584.69	941.03	934.30	1129.24	1841.16
210	1044.41	763.44	705.98	811.47	842.55	643.55	596.25	688.65	1057.05
211	735.87	578.34	566.71	589.63	557.82	460.55	444.71	474.04	611.17
212	484.10	421.57	367.88	402.13	328.47	299.61	264.12	277.98	392.32
213	916.11	588.36	559.76	670.85	719.58	474.98	455.02	540.22	847.35
214	174.31	226.43	223.57	245.89	86.31	139.34	140.63	152.45	259.95
215	857.23	815.89	828.33	868.89	679.33	674.89	688.73	725.44	1232.87
216	460.18	386.69	352.93	399.72	311.46	248.76	260.38	296.45	514.08
217	1795.48	1431.16	1395.18	1446.80	1509.70	1245.38	1214.17	1259.18	1965.02
218	922.20	593.73	559.28	632.13	728.09	481.37	449.20	518.50	827.07
219	1252.95	897.97	888.82	925.90	1003.72	753.21	745.71	777.65	1170.86
220	615.34	513.38	511.14	561.95	469.17	400.66	395.03	444.07	643.81
221	366.66	377.83	357.08	383.58	256.01	277.37	264.47	284.59	440.22
222	870.29	666.36	587.38	720.96	696.59	549.86	488.14	598.63	1145.58
223	477.25	503.29	443.23	497.51	343.07	387.93	345.69	382.82	549.97
224	658.44	472.47	457.46	496.12	517.93	361.65	353.42	380.25	794.46
225	635.90	447.59	449.93	534.12	471.01	330.31	346.02	414.04	757.18
226	1541.80	1078.28	1022.46	1171.58	1276.65	932.49	872.60	1016.53	1574.52
227	939.67	799.31	754.41	839.57	723.38	667.21	634.44	702.46	1255.77

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
228	657.16	414.54	391.02	447.67	520.62	297.09	277.26	322.71	874.94
229	1396.15	917.99	863.40	983.08	1262.37	773.41	716.93	831.14	1319.59
230	1007.54	704.88	639.72	748.82	883.72	566.74	511.36	614.10	868.43
231	1692.18	1081.83	1033.94	1109.04	1535.61	929.38	891.77	953.77	1621.07
232	1373.84	890.66	880.19	929.90	1195.93	759.97	754.38	793.65	1237.54
233	767.42	560.52	490.31	591.92	680.04	411.59	388.41	476.70	677.86
234	1797.22	1409.22	1344.61	1393.25	1596.58	1236.70	1191.08	1226.40	1592.18
235	1922.88	905.58	978.51	1115.95	1751.37	745.70	822.57	937.88	2246.90
236	2085.54	1211.04	1103.79	1457.04	1913.96	1025.08	942.55	1278.60	1903.08
237	1395.58	948.71	911.99	1063.03	1239.43	796.76	767.44	882.01	1691.77
238	848.49	772.15	744.78	778.51	730.62	633.50	615.70	643.02	1025.73
239	882.91	705.05	702.33	811.64	772.60	581.66	579.80	690.45	1358.90
240	1058.07	879.13	803.87	939.09	940.01	744.69	688.43	813.36	1495.69
241	522.18	367.39	357.40	386.04	443.45	265.66	259.73	282.01	624.02
242	992.04	681.57	650.04	759.20	888.07	557.51	529.98	631.94	1014.31
243	1094.13	800.75	792.02	841.20	976.33	650.72	645.46	691.21	1210.78
244	499.97	467.22	422.27	468.86	425.02	361.65	327.94	361.60	417.37
245	461.19	364.17	350.88	361.33	379.49	242.83	240.64	242.79	547.19
246	1351.11	963.02	924.20	1064.55	1222.56	825.21	781.17	909.15	1446.00
247	511.78	431.60	416.73	475.73	417.52	317.60	299.64	351.41	940.96
248	1331.96	938.58	892.56	957.21	1201.15	798.89	756.25	821.53	1196.45
249	1479.87	1182.65	1150.51	1209.54	1346.02	1017.41	995.42	1039.23	1362.18
250	772.29	656.96	550.38	697.24	646.37	510.75	434.56	549.77	895.12

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
251	621.31	421.31	407.57	443.14	523.45	295.50	286.73	311.54	763.35
252	595.89	421.53	412.66	443.78	508.31	310.73	304.16	331.71	607.44
253	1414.10	1191.23	1166.05	1303.63	1276.65	1009.30	996.05	1115.83	2174.11
254	778.01	531.41	516.98	546.26	674.95	410.40	387.25	415.19	797.80
255	956.39	770.91	719.86	784.14	850.28	636.68	601.84	650.88	1187.18
256	1196.99	888.43	814.17	874.64	1063.91	731.06	681.94	732.11	1371.64
257	1042.67	920.96	852.41	970.84	900.83	764.38	711.66	812.59	1601.68
258	1704.93	1472.54	1386.81	1542.34	1493.94	1300.88	1206.22	1372.70	2339.55
259	581.75	558.27	536.87	599.09	479.20	424.75	414.79	457.52	769.61
260	688.71	584.90	555.37	624.34	596.50	474.88	441.98	506.21	1200.85
261	1277.49	930.00	884.60	1007.75	1146.45	786.68	749.32	869.72	1412.83
262	1507.35	1192.61	1178.51	1283.95	1377.56	1037.04	1028.70	1115.22	1670.32
263	549.54	437.44	412.46	454.80	469.83	312.13	299.08	323.52	762.30
264	981.61	545.77	531.02	578.32	869.68	425.60	418.92	458.12	1102.81
265	1838.81	970.17	975.43	1150.00	1640.25	836.48	834.94	985.87	1733.58
266	713.36	434.91	408.02	463.72	567.60	311.39	290.39	334.13	820.39
267	312.40	296.66	276.20	309.98	223.92	182.13	169.62	192.43	274.44
268	1446.01	1043.56	799.87	923.32	1186.61	874.51	658.39	759.42	1438.69
269	779.75	528.28	466.70	541.04	618.28	388.57	337.73	400.58	766.73
270	856.70	557.15	500.09	557.45	701.21	431.30	381.72	422.68	816.85
271	1375.38	892.08	876.37	911.79	1180.54	744.40	723.78	769.35	1258.33
272	1521.44	1126.07	1062.90	1101.96	1330.75	975.17	926.44	956.98	1543.42
273	510.83	308.27	306.71	339.47	392.48	208.47	207.30	230.52	497.86

Table 1. The volume of breast contour generated from difference contouring approach (continue from the previous page).

Patient No.	Volume								
	CTV_skin	Atlas_skin1	Atlas_skin2	Atlas_skin3	CTV_crop	Atlas_crop1	Atlas_crop2	Atlas_crop3	Iso _{95%}
274	964.36	1000.51	931.08	994.76	799.11	835.21	786.03	837.13	1370.35
275	1068.08	1040.75	973.62	1101.67	922.03	898.25	827.11	953.52	1468.28
276	656.49	701.14	645.75	701.19	532.62	575.80	536.65	579.47	921.37
277	683.05	750.04	728.51	809.88	548.43	616.00	602.75	670.93	1078.89
278	664.51	759.85	729.91	834.30	533.04	618.87	586.16	682.46	1037.07
279	1393.04	1224.14	1152.63	1279.61	1190.50	1068.72	999.48	1113.37	2166.75
280	568.58	539.35	521.24	537.14	445.31	422.41	401.15	408.74	725.85

Appendix C: The NTCP estimates from LKB (A) and RS (B) models for including (skin) and excluding skin (Crop) contours of non-fibrosis and fibrosis grade 1, 2, and 3.

