

Supplementary Table 1: List of all patients with corresponding Gleason score and TMN staging at baseline, PSA levels at diagnosis, corresponding assigned telomere profile grouping and cluster for each patient

Patient	Gleason score (+0m)	TNM staging (+0m)	PSA pre-TRX	PSA 6 months after continued ADT	PSA 6 months after complete radiotherapy	PSA 36 months after initial treatment	Telomere group	Cluster	Can1	Can2
1	9	T2bNXMX	11,24	<0.1	<0.1	<0.1	Group 1	2	-147919	-0.52495
2	9	T2b	29,18	≥0.1	≥0.1	≥0.1	Group 1			
3	9	T2a	13,27	<0.1	<0.1	<0.1	Group 1			
4	8	T2b	5,83	<0.1	<0.1	<0.1	Group 2	2	-0.74308	-0.32467
5	8	T2a	7,44	<0.1	<0.1	<0.1	Group 5	2	161239	-0.50863
6	9	T2a	0,78	<0.1	<0.1	<0.1	Group 2	2	-0.28599	-100708
7	9	T2a	41,14	<0.1	<0.1	≥0.1	Group 1	1	-262602	-0.53003
8	9	T2c	26,68	<0.1	<0.1	<0.1	Group 4	2	0.51338	-0.37376
9	9	T2cN0M0	14,42	≥0.1	≥0.1	<0.1	Group 2	2	-141838	0.19197
10	9	T1c	26,14	≥0.1	<0.1	<0.1	Group 1	1	-246658	-0.10748
11	8	T1cNXM0	14,09	≥0.1	≥0.1	<0.1	Group 1	1	-258832	183815
12	8	T1c	6,93	<0.1	<0.1	<0.1	Group 1	1	-260056	177872
13	8	T2b	23,19	≥0.1	<0.1	≥0.1	Group 2	1	-532545	527887
14	10	T2cNXM0	14,56	≥0.1	<0.1	<0.1	Group 5	3	282157	0.21655
15	9	T2a	12,34	≥0.1	<0.1	≥0.1	Group 2	2	-157354	-0.51530
16	8	T2b	40,02	<0.1	<0.1	<0.1	Group 2	2	0.98543	-0.79690
17	9	T2c	23,8	≥0.1	<0.1	≥0.1	Group 2	2	-208020	-0.96423
18	9	T2b	4,14	<0.1	<0.1	<0.1	Group 2	2	-0.00424	-161753
19	8	T2a	15,82	≥0.1	≥0.1	≥0.1	Group 5	1	-346410	0.49974
20	9	T2cN0M0	15,41	≥0.1	<0.1	<0.1	Group 2	2	120507	0.71111

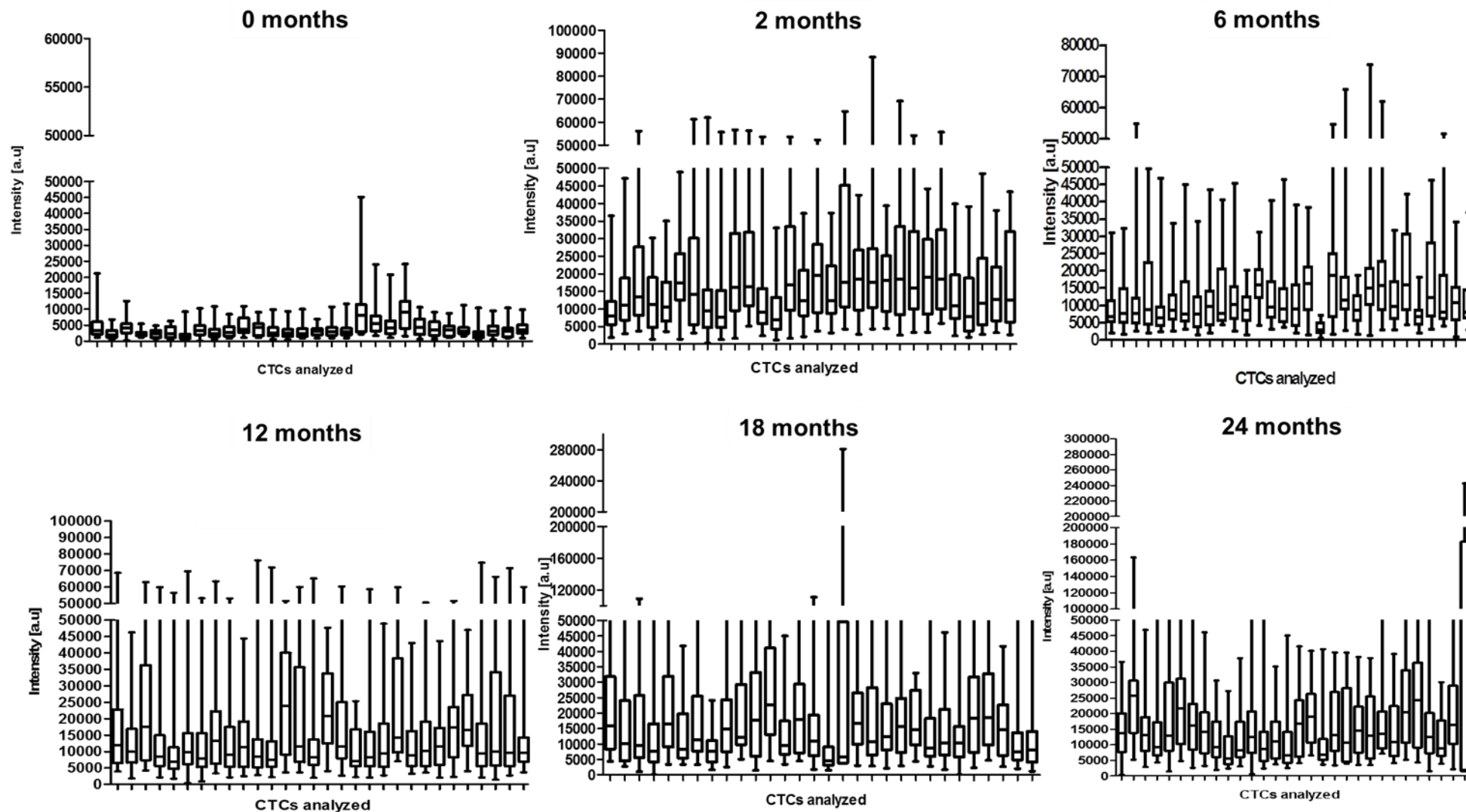
21	9	T2a	11,26	<0.1	<0.1	<0.1	Group 3	2	0.44128	138811
22	8	T2a	11,25	≥ 0.1	≥ 0.1	≥ 0.1	Group 2	2	102142	-0.08522
23	8	T1cN0M0	7,49	≥ 0.1	<0.1	≥ 0.1	Group 3	3	276172	-0.51295
24	8	T3a	26,11	<0.1	<0.1	<0.1	Group 2	2	-100535	-102836
25	8	T2a	7,42	<0.1	<0.1	<0.1	Group 1	2	-101953	0.79975
26	9	T2bN0M0	17,67	≥ 0.1	≥ 0.1	≥ 0.1	Group 1	2	-0.09862	0.48048
27	8	T3NxM0	21,79	<0.1	<0.1	<0.1	Group 1	3	354188	0.31104
28	8	T2b	8,3	<0.1	<0.1	<0.1	Group 5	3	262253	0.42097
29	8	T1c	10,84	<0.1	<0.1	<0.1	Group 1	3	242184	-0.23919
30	8	T1c	21,94	<0.1	<0.1	≥ 0.1	Group 5	2	-136686	-0.93894
31	8	T2a	10,44	<0.1	<0.1	<0.1	Group 1	2	0.77460	0.71060
32	9	T2bNXM0	14,25	<0.1	<0.1	<0.1	Group 4	2	-0.41973	-201287
33	9	T1c	20,58	≥ 0.1	≥ 0.1	≥ 0.1	Group 5	2	142330	110480
34	9	T2b	21,86	<0.1	<0.1	<0.1	Group 2	2	-0.21173	-199808
35	9	T2a	22,13	<0.1	<0.1	<0.1	Group 3	2	103076	-0.09941
36	9	T1c	11,19	<0.1	<0.1	<0.1	Group 1	2	-187272	356138
37	8	T1c	5,54	<0.1	<0.1	≥ 0.1	Group 4	3	277013	0.53289
38	8	T1cNxM0	15,06	<0.1	<0.1	<0.1	Group 5	2	-123398	-157546
39	9	T2a	3,08	≥ 0.1	<0.1	<0.1	Group 2	2	0.70685	-0.31559
40	8	T1c	8,05	<0.1	<0.1	<0.1	Group 5	1	-321109	-0.01944
41	9	T1c	14,05	≥ 0.1	≥ 0.1	<0.1	Group 2	2	0.64119	-0.48360
42	8	T1c	5,78	<0.1	<0.1	<0.1	Group 2	2	-165160	-175129
43	9	T2b	8,4	<0.1	<0.1	<0.1	Group 3	2	101151	-0.16676
44	9	T2cNXM0	26,6	<0.1	<0.1	<0.1	Group 4	2	-0.29527	-0.72122
45	8	T1c	13,07	≥ 0.1	<0.1	<0.1	Group 2	1	-258187	0.55321
46	9	T1cN1M0	41,68	<0.1	<0.1	<0.1	Group 1	3	337705	-0.17550

47	8	T2a	5,26	<0.1	<0.1	≥0.1	Group 1	3	330126	109388
48	8	T2b	11,76	≥0.1	≥0.1	<0.1	Group 2	2	-162858	-119404
49	8	T2bN0M0	10,79	<0.1	<0.1	≥0.1	Group 2	3	324360	0.24532
50	8	T2b	17,1	≥0.1	<0.1	<0.1	Group 1	3	411922	0.75707
51	8	T1cNXM0	16,49	<0.1	<0.1	<0.1	Group 5	2	-112927	0.46203
52	8	T1cNXM0	17,11	≥0.1	<0.1	<0.1	Group 5	2	138686	0.42735
53	8	T3a	255,2	≥0.1	≥0.1	≥0.1	Group 5	3	408517	0.92432
54	9	T2a	15,27	<0.1	<0.1	<0.1	Group 4	2	-0.68257	0.42220
55	9	T2a	10,94	<0.1	<0.1	≥0.1	Group 4	2	-118024	0.99691
56	9	T2b	12,64	≥0.1	<0.1	<0.1	Group 5	2	-0.47231	-0.01760
57	9	T1cNXM0	12,27	<0.1	<0.1	≥0.1	Group 3	2	0.63361	-0.32300
58	8	T1cNXM0	8,09	≥0.1	<0.1	<0.1	Group 3	2	-180304	0.02753
59	9	T1cN0M0	11	≥0.1	<0.1	<0.1	Group 2	2	0.13262	135275
60	9	T1c	51,81	<0.1	<0.1	<0.1	Group 1	1	-274912	0.77449
61	9	T1cN0M0	81,48	≥0.1	≥0.1	≥0.1	Group 5	2	-0.82118	-0.95578
62	8	T2N0M0	10,61	<0.1	<0.1	<0.1	Group 2	2	0.15314	-0.53915
63	9	T1c	21,03	≥0.1	≥0.1	<0.1	Group 5	1	-363115	-160852
64	8	T2cN0M0	11,02	<0.1	<0.1	<0.1	Group 4	2	-0.26551	-0.38642
65	8	T1cN0M0	28	<0.1	<0.1	<0.1	Group 1	2	0.49166	0.29631
66	9	T2bN0M0	11,89	≥0.1	<0.1	<0.1	Group 1	2	-0.71121	0.33931
67	9	T1cNXM0	36,41	<0.1	<0.1	<0.1	Group 2	2	0.60510	-0.52022
68	8	T2aN0M0	12,68	<0.1	<0.1	<0.1	Group 3	2	-0.53824	-188695
69	8	T3N0M0	56,71	<0.1	<0.1	<0.1	Group 3	2	119635	-0.60886
70	9	T4N0M0	15,93	<0.1	<0.1	<0.1	Group 5			
71	9	T2a	34,42	≥0.1	<0.1	<0.1	Group 3	2	-0.22517	-136017
72	9	T2cN0M0	6,6	<0.1	<0.1	≥0.1	Group 5	2	-141647	-0.41423

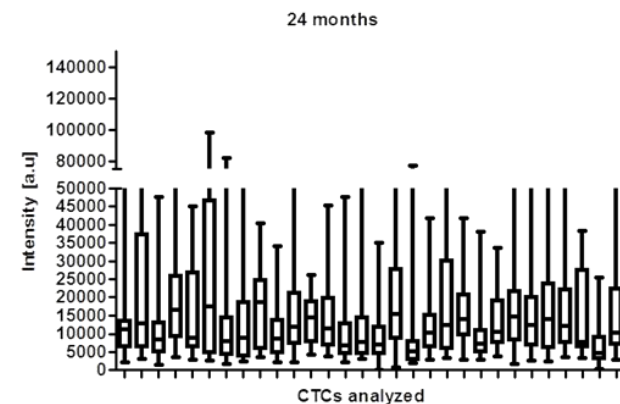
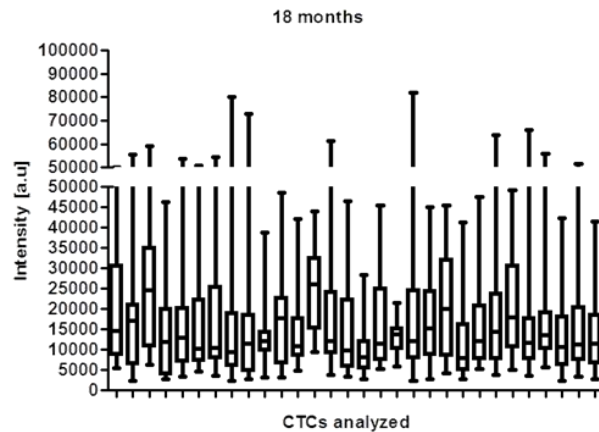
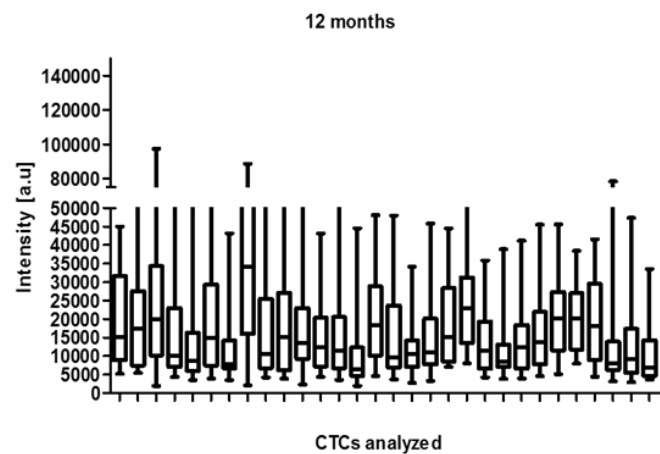
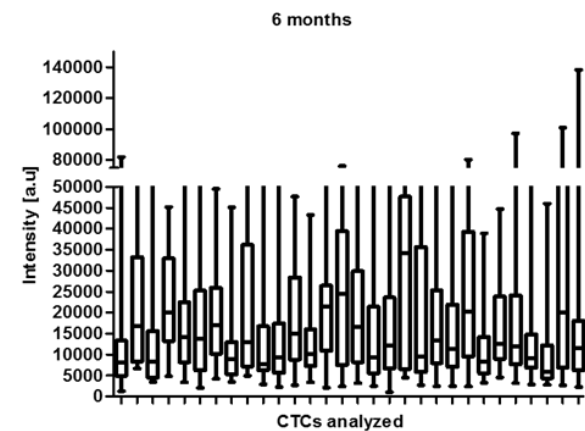
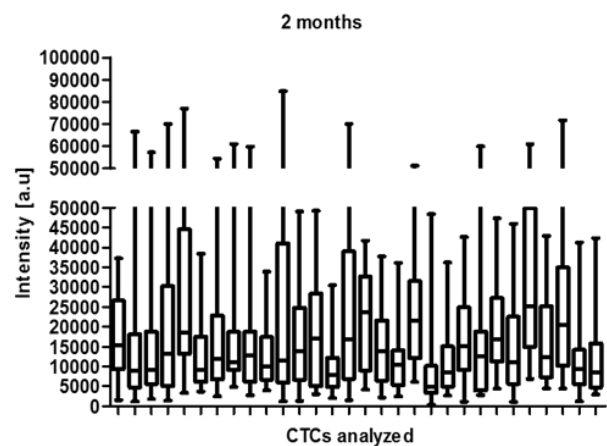
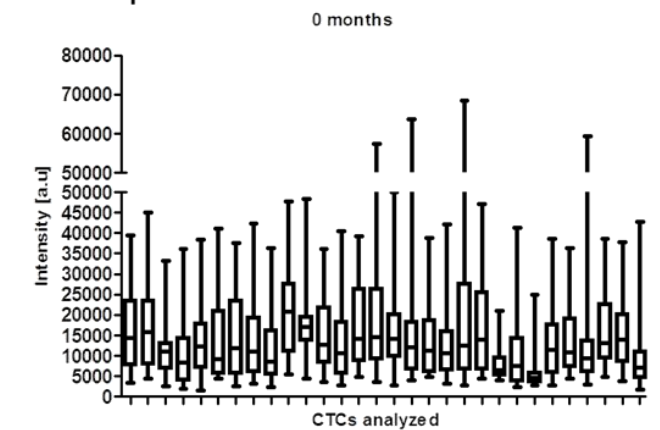
73	9	T2b	9,17	<0.1	<0.1	<0.1	Group 5	2	-0.17163	-117332
74	9	T2cN0M0	116,3	≥ 0.1	≥ 0.1	≥ 0.1	Group 4	1	-428965	-0.25561
75	9	T2c	33,78	≥ 0.1	≥ 0.1	<0.1	Group 3	1	-428965	-0.25561
76	8	T2c	5,32	<0.1	<0.1	<0.1	Group 4	3	246297	-0.42132
77	8	T2c	0,07	<0.1	<0.1	<0.1	Group 2	2	-0.71630	-0.22374
78	9	T1cN0M0	21,03	<0.1	<0.1	<0.1	Group 3	2	-165589	0.65181
79	8	T2aN0M0	13,69	<0.1	<0.1	<0.1	Group 3	2	-0.47854	-0.18046
80	9	T2a	15,01	≥ 0.1	<0.1	<0.1	Group 4	1	-307468	0.58844
81	8	T1c/T2a	8,43	<0.1	<0.1	<0.1	Group 3	2	0.27889	0.04974
82	9	T2b	26,05	≥ 0.1	≥ 0.1	<0.1	Group 2	2	-124395	0.54719
83	9	T2a	17,79	≥ 0.1	≥ 0.1	<0.1	Group 3	2	-0.54808	0.96576
84	9	T2bN0M0	24,02	≥ 0.1	≥ 0.1	≥ 0.1	Group 2	2	0.90935	-0.63758
85	8	T2a	10,89	<0.1	<0.1	<0.1	Group 2	2	161227	0.00918
86	10	T1cN0M0	10,51	≥ 0.1	≥ 0.1	<0.1	Group 5	1	-332960	-0.64543
87	8	T2aN0M0	11,57	<0.1	<0.1	<0.1	Group 2	2	-136139	-0.30145
88	9	T3aN0M0	14,32	≥ 0.1	<0.1	<0.1	Group 1	2	-147886	-0.08015
89	8	T1c	21,09	≥ 0.1	<0.1	<0.1	Group 2	2	-109072	-0.26580
90	9	T3a	8	<0.1	<0.1	<0.1	Group 1	2	152494	-0.20074
91	8	T1c	13,19	≥ 0.1	≥ 0.1	<0.1	Group 5	2	-154630	-0.25919
92	8	T2b	0,01	<0.1	<0.1	<0.1	Group 2	3	250350	0.72792
93	9	T1c	8,54	≥ 0.1	≥ 0.1	<0.1	Group 4	2	-0.19839	-0.81608
94	9	T2c	17,26	≥ 0.1	≥ 0.1	<0.1	Group 2	3	373469	0.37421
95	8	T1c	25,79	<0.1	<0.1	<0.1	Group 2	2	-0.28999	-0.26258
96	8	T1c	15,74	≥ 0.1	≥ 0.1	≥ 0.1	Group 3	3	535144	0.71030
97	9	T1c	75,97	<0.1	<0.1	<0.1	Group 4	3	525865	0.61193
98	9	T2bN0M0	13,61	<0.1	<0.1	<0.1	Group 1	3	476392	-0.20637

99	9	T2aN0M0	20,56	<0.1	<0.1	<0.1	Group 1	3	364578	105203
100	8	T1c	42,58	<0.1	≥ 0.1	<0.1	Group 1	2	156283	0.60847

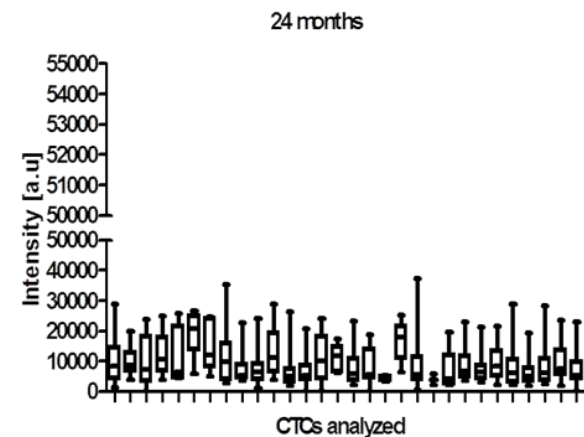
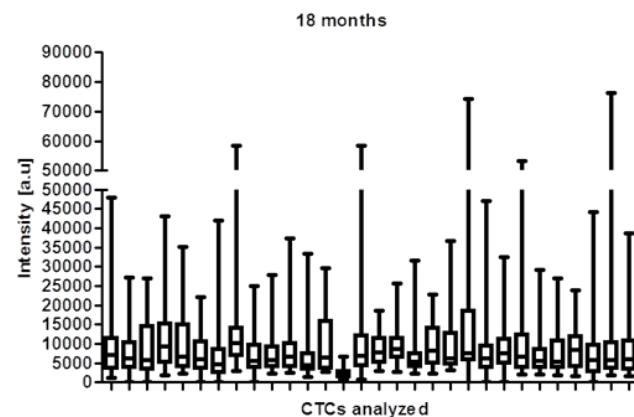
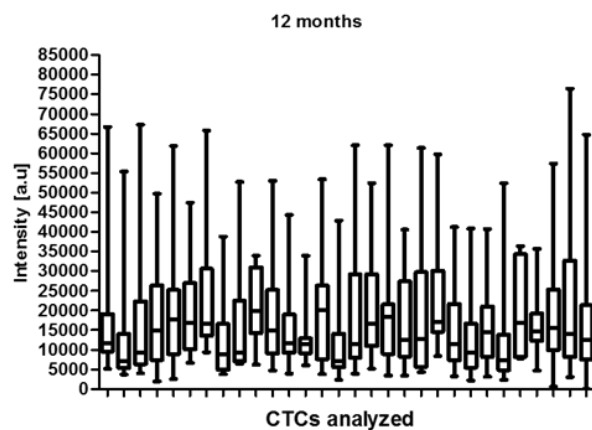
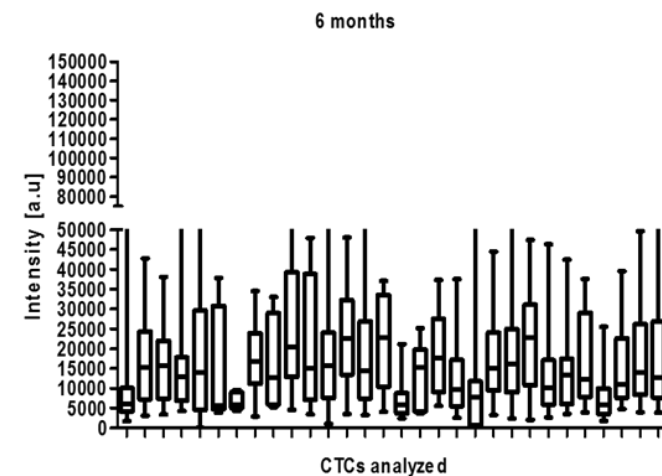
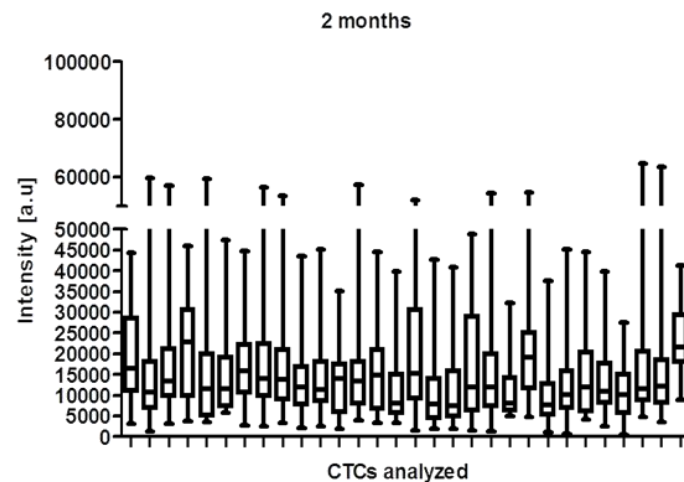
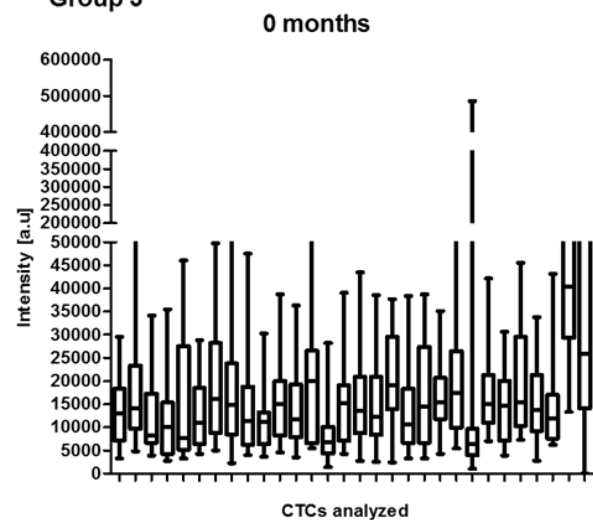
Group 1



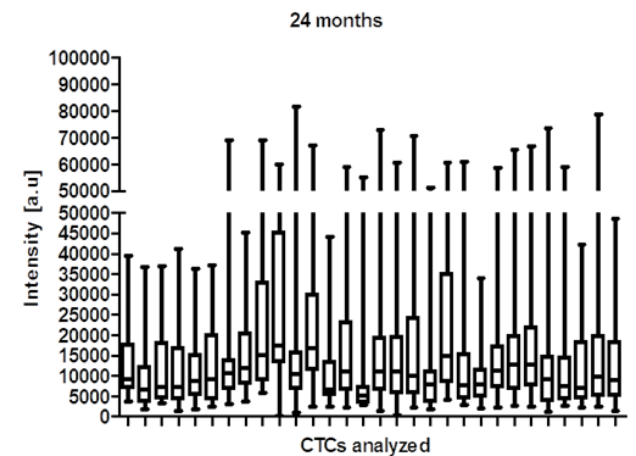
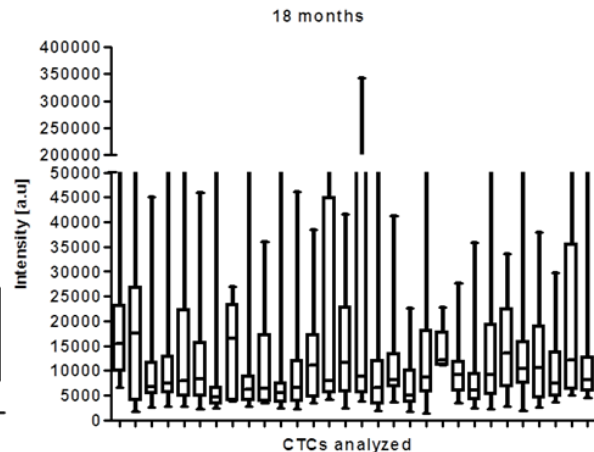
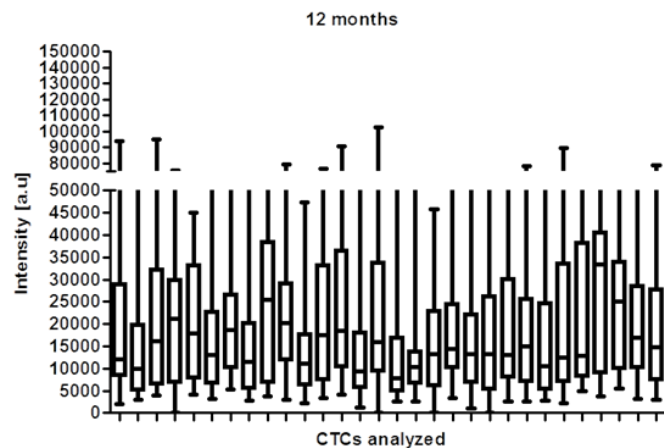
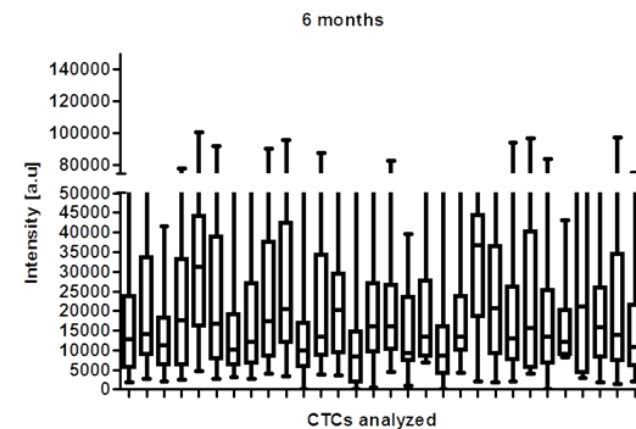
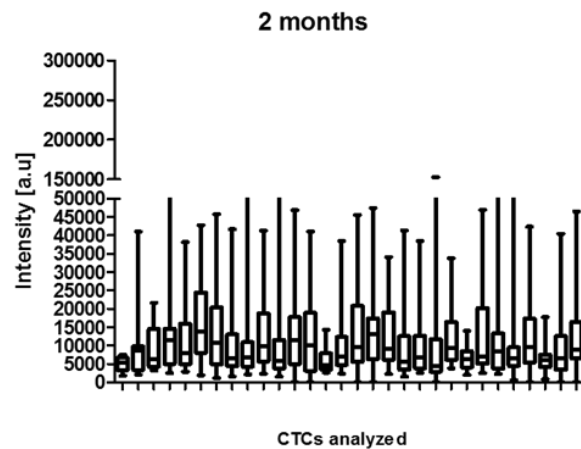
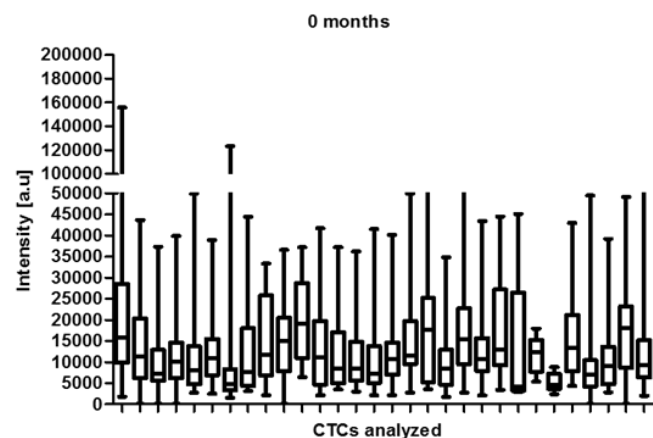
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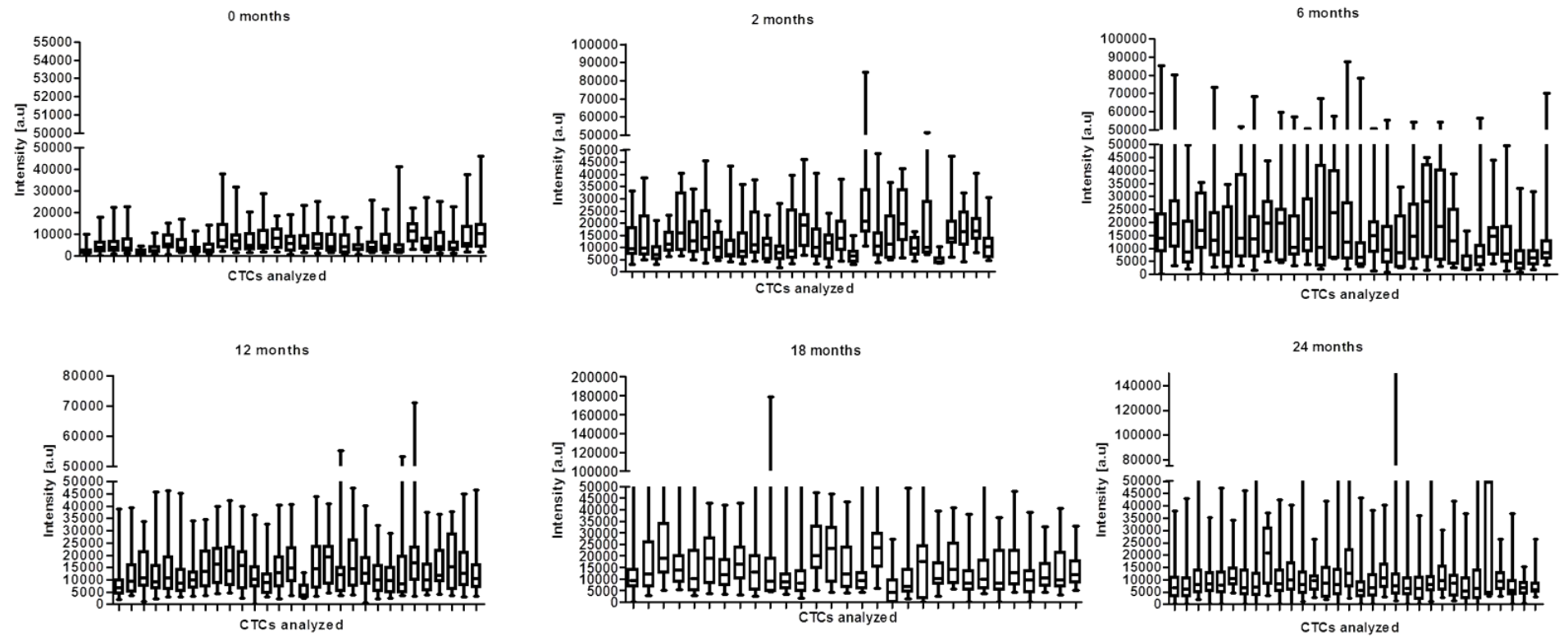
Group 3



Group 4

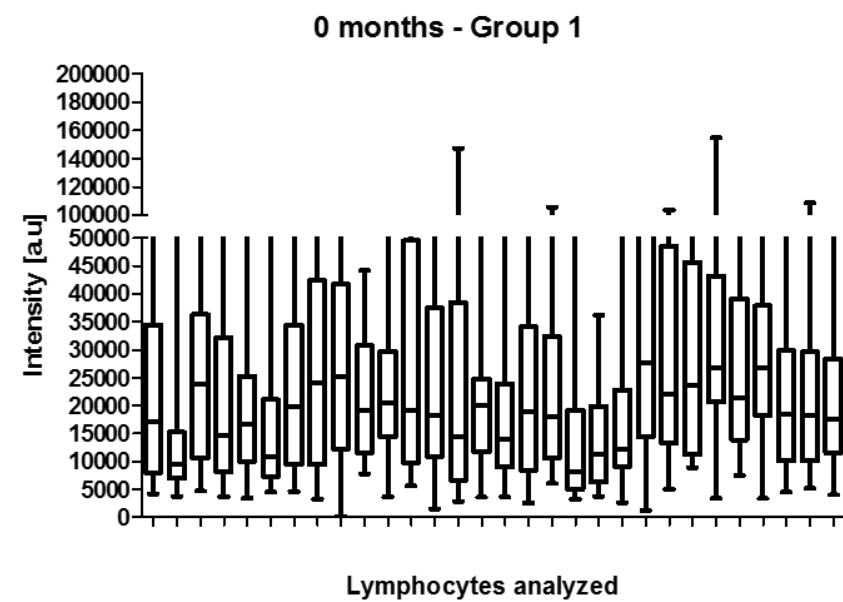
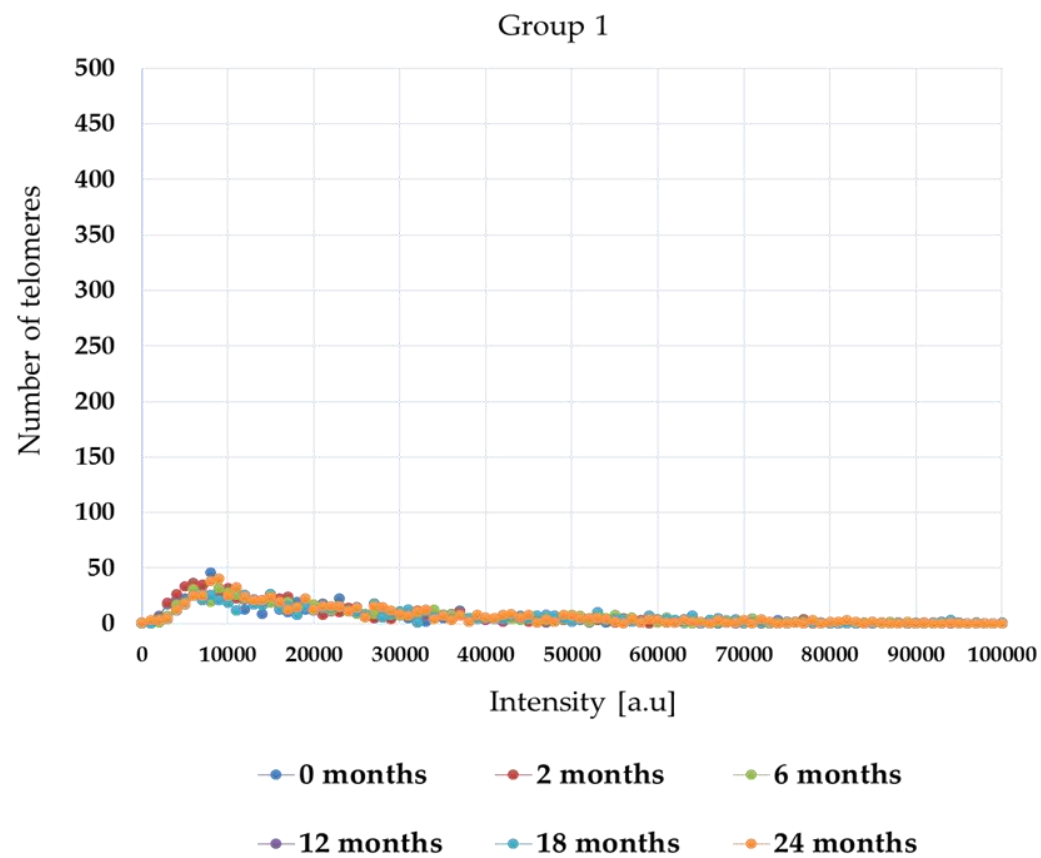


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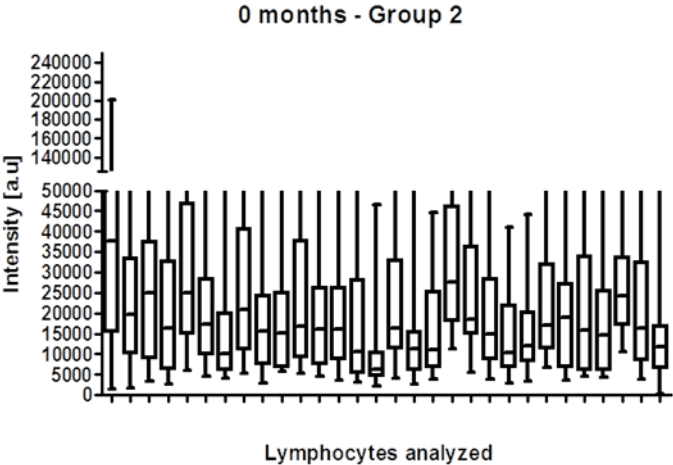
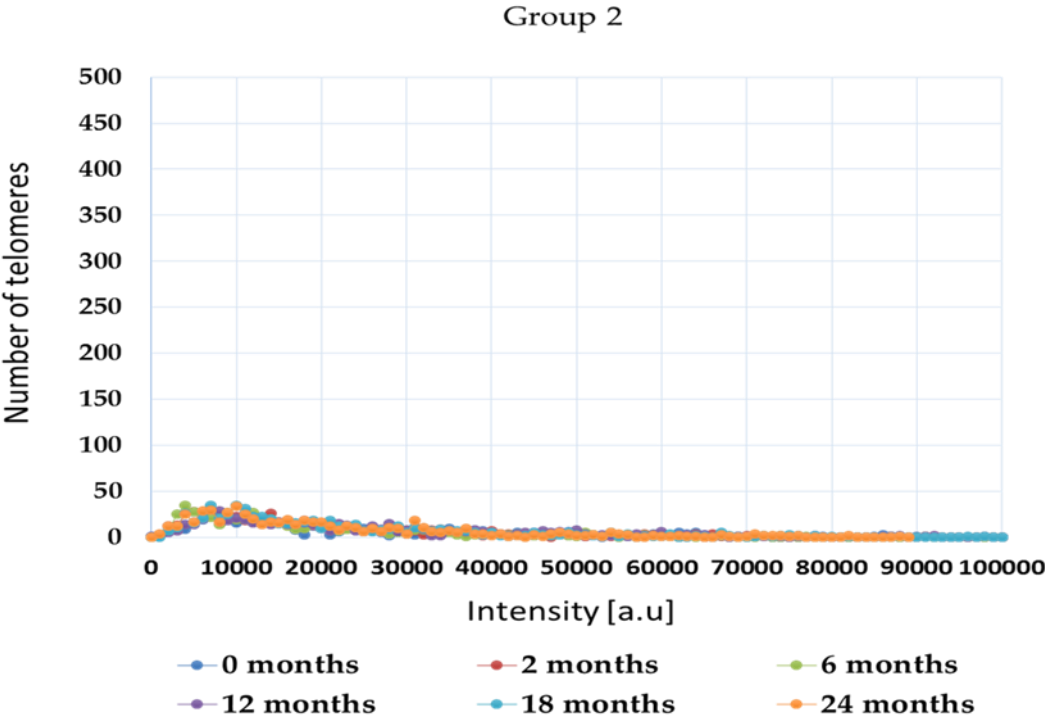


Supplementary Figure 1. Representative bar plots to illustrate inter-sample variability of representative individual samples in the Groups 1, Group 2, Group 3, Group 4, and Group 5.

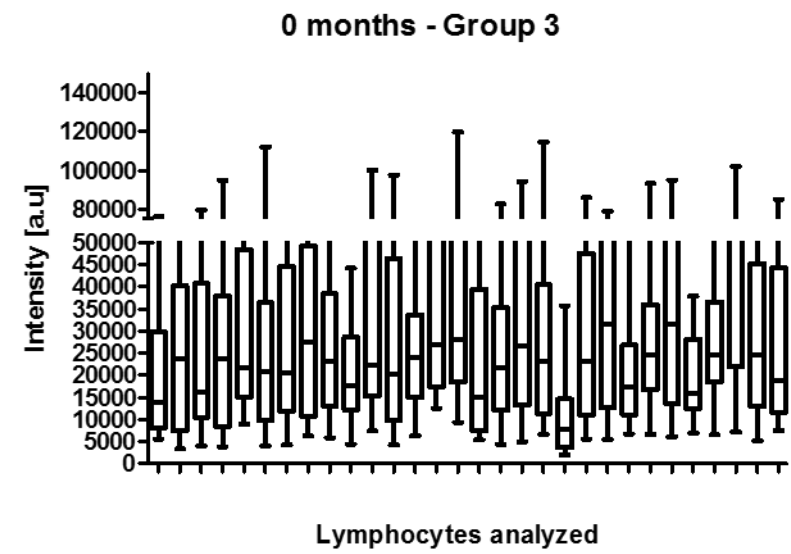
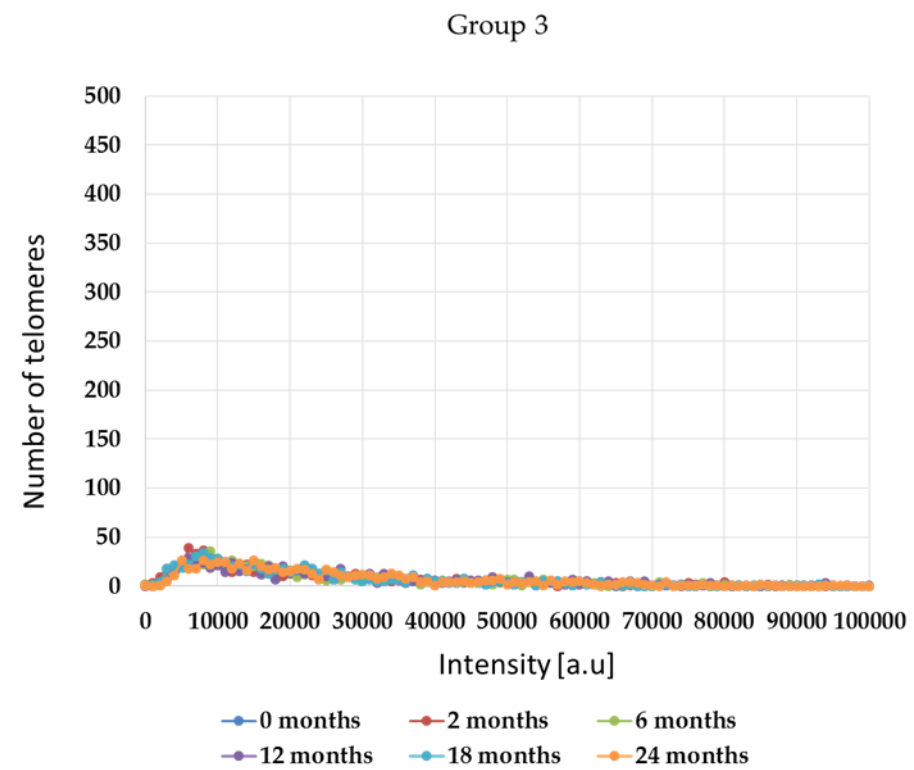
A



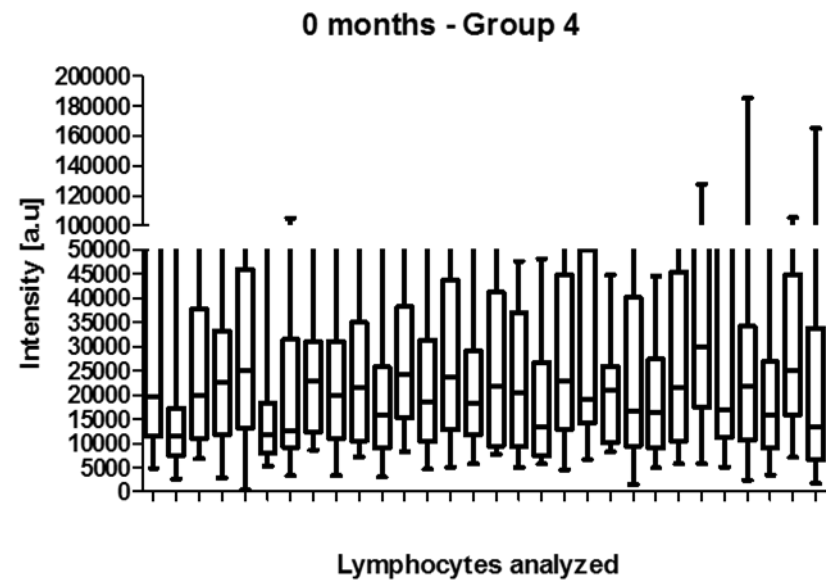
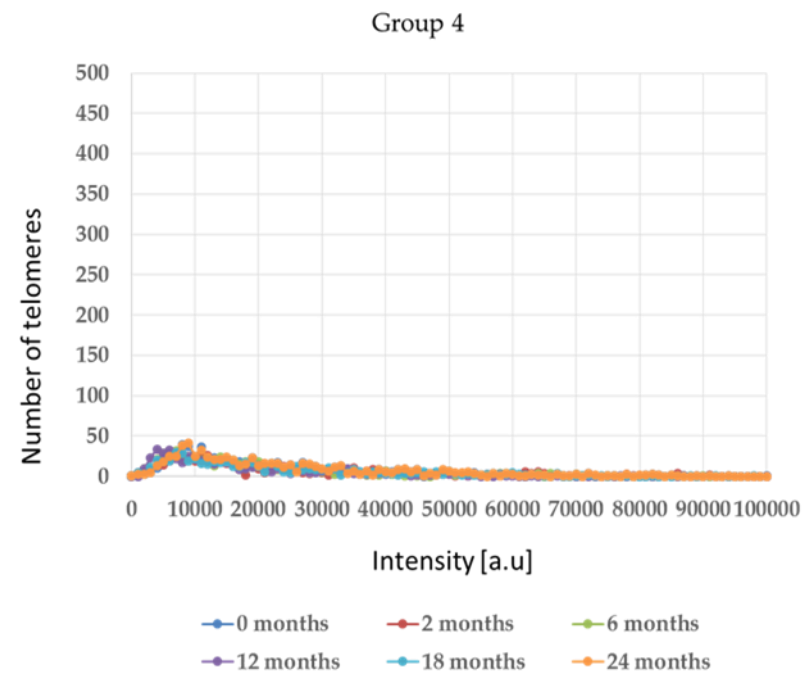
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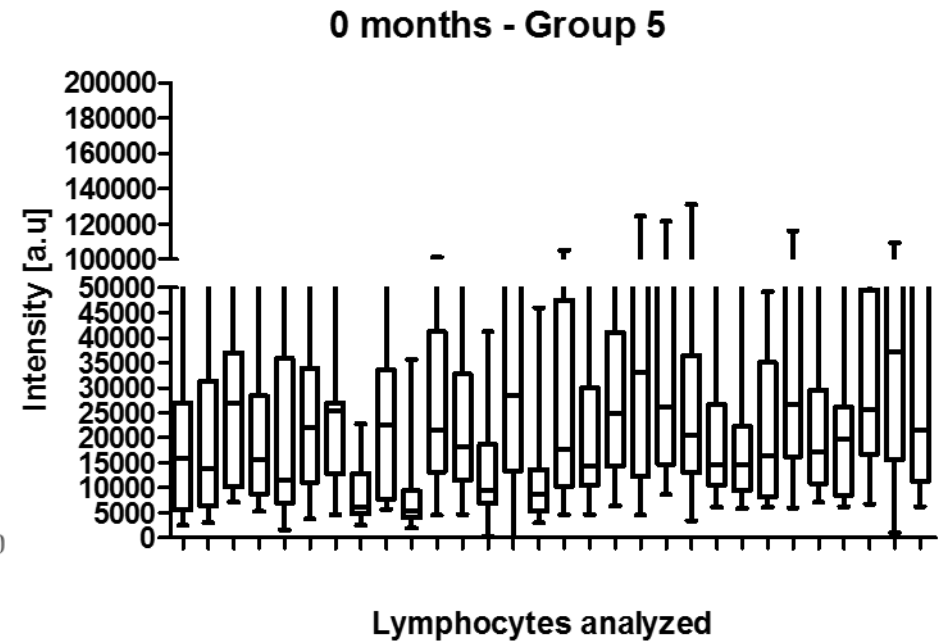
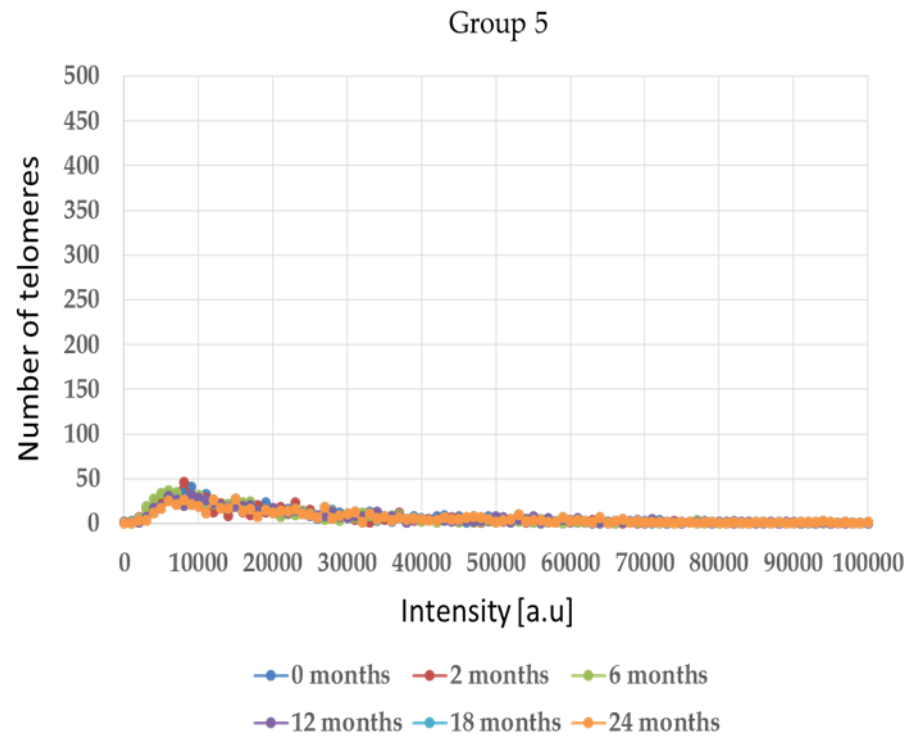
c



D



E

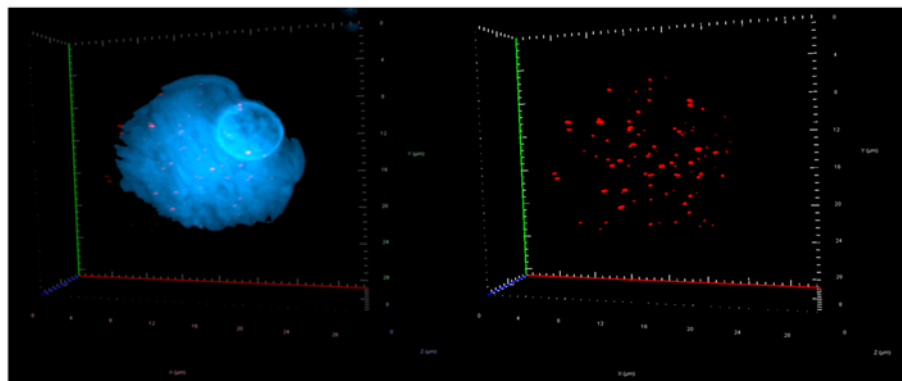


Supplementary Figure 2. Representative examples of the lymphocytes (internal control) dynamics of telomere length profiles over time for patients assigned to Group 1 (A), Group 2 (B), Group 3 (C), Group 4 (D), and Group 5 (E). In each graph, the telomere length is shown in arbitrary units of fluorescence (AU). Baseline profile (+0m, untreated) and other time point (2, 6, 12, 18, 24 months) are demarked with colors. B) bars plot to illustrate inter-sample variability of representative individual samples in the groups (for simplicity just the 0 month – untreated time point was represented).

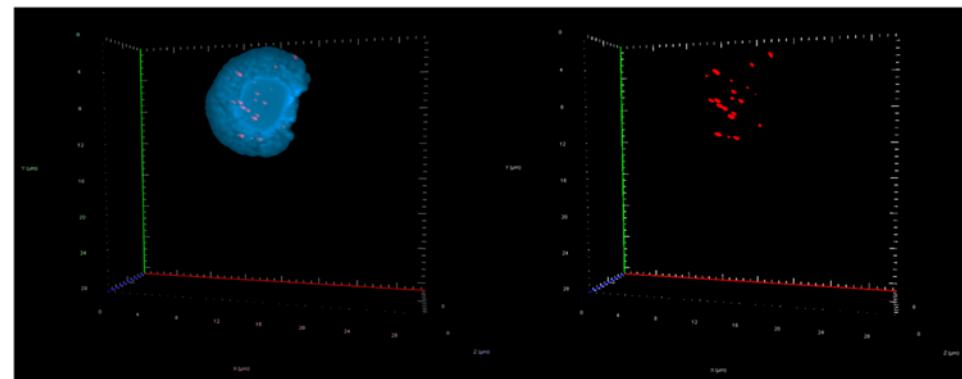
Group 1

A

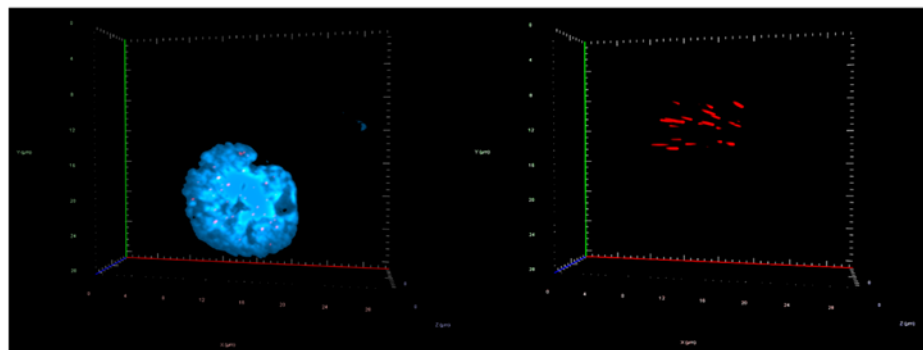
0 months



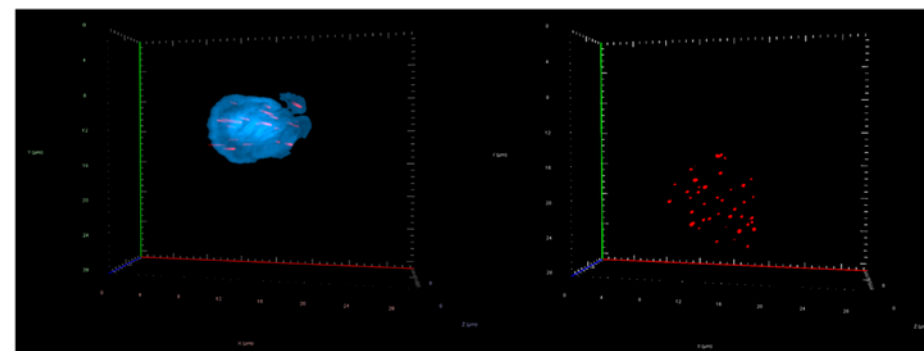
2 months



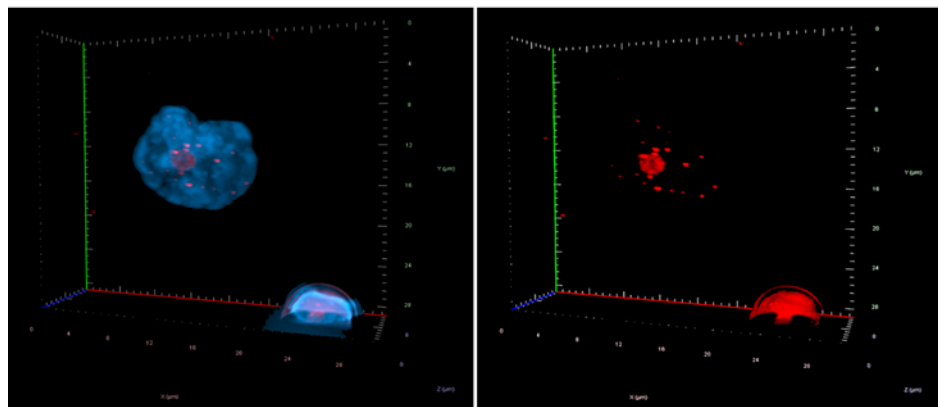
6 months



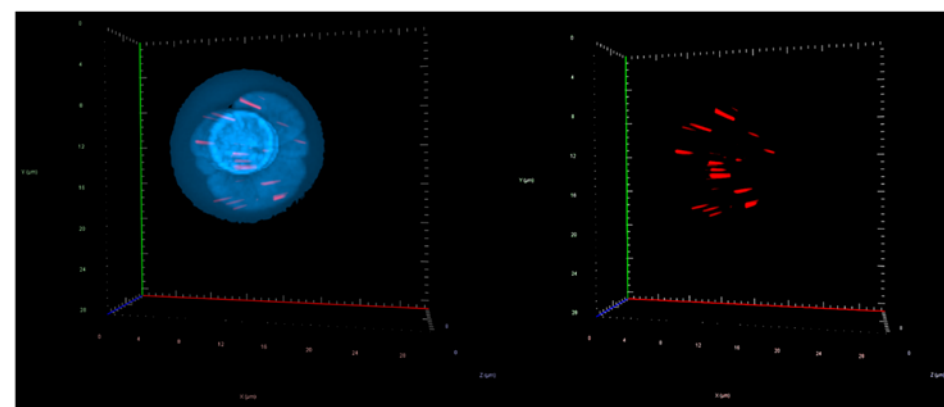
12 months



18 months



24 months



B

Group 2

0 months

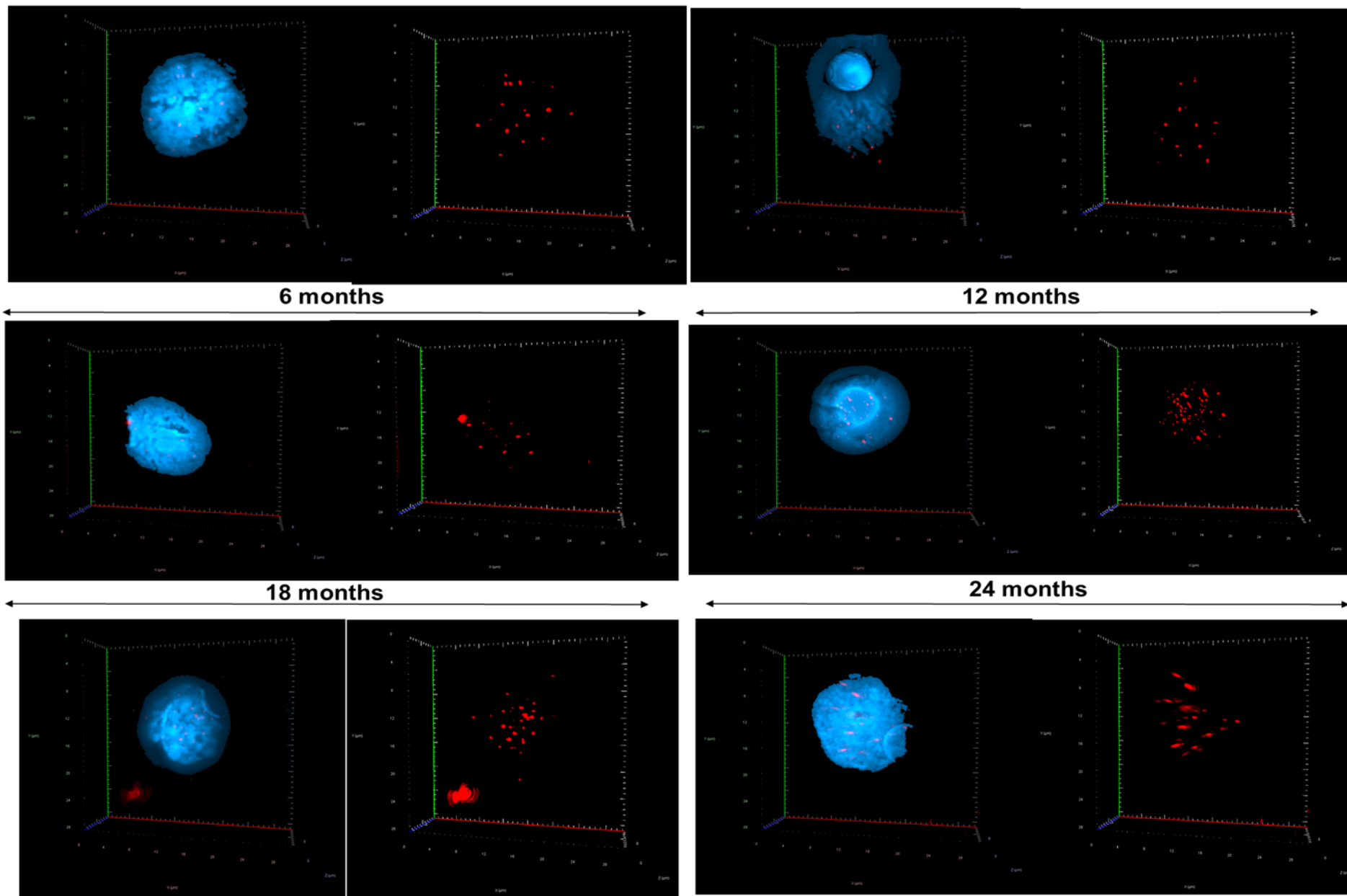
2 months

6 months

12 months

18 months

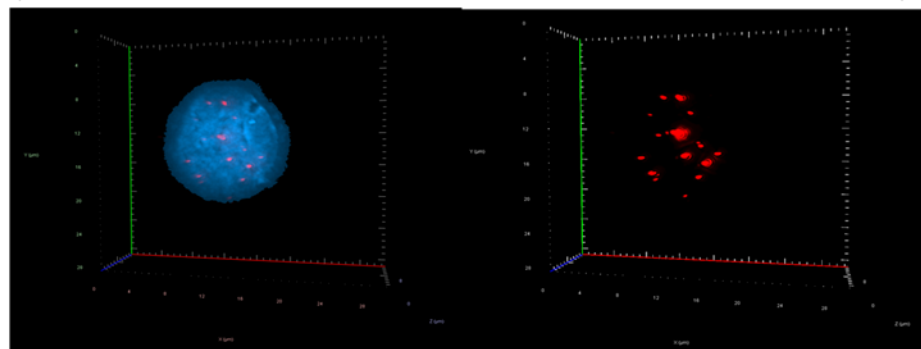
24 months



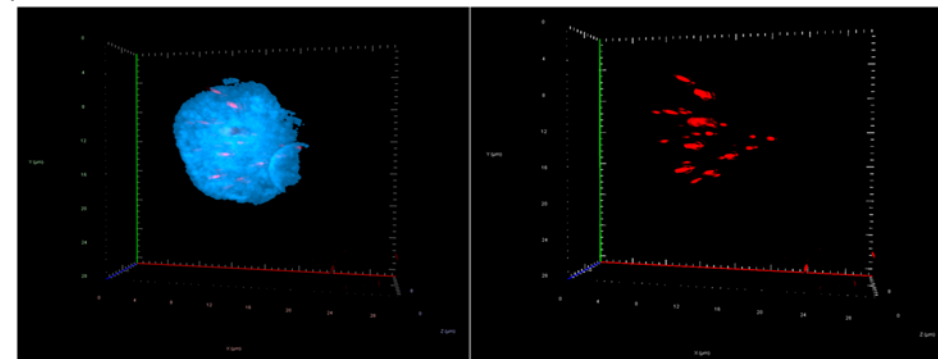
Group 3

C

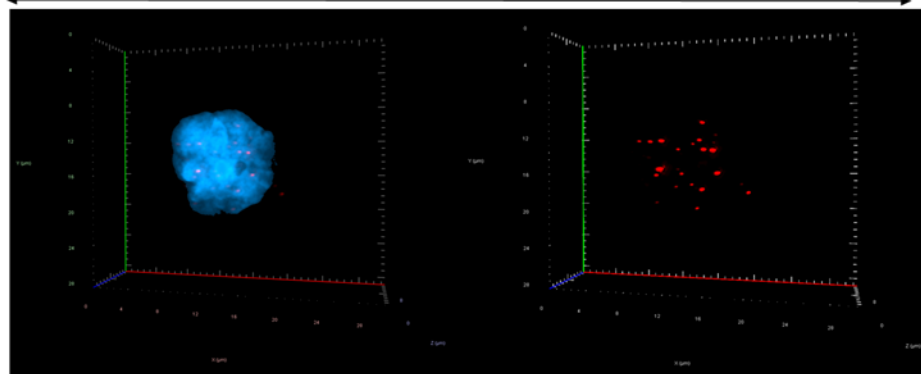
0 months



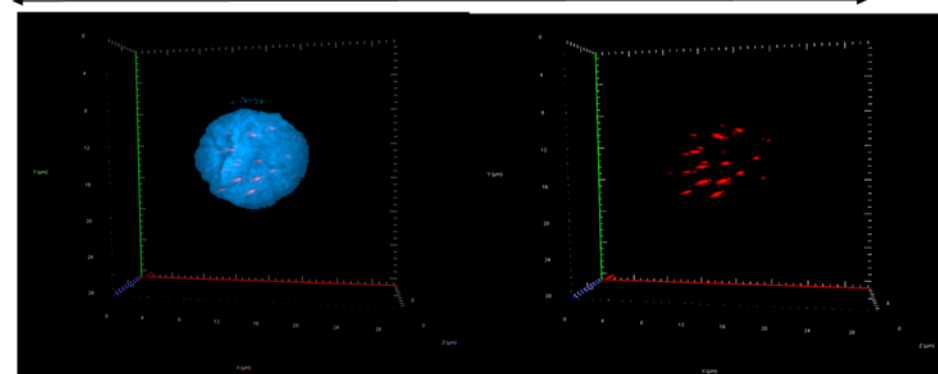
2 months



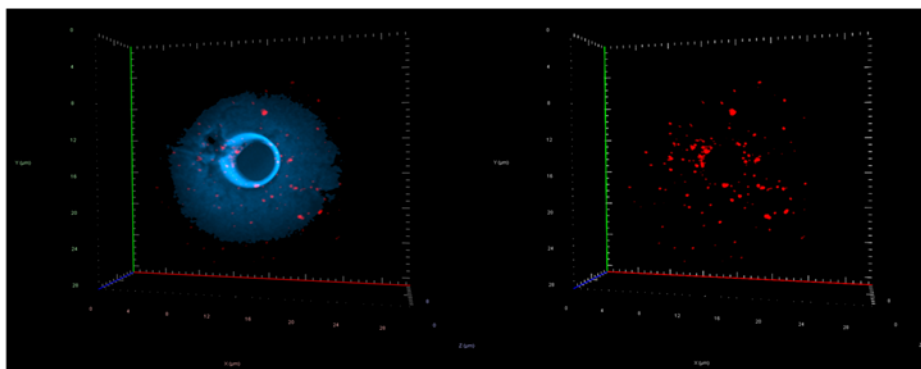
6 months



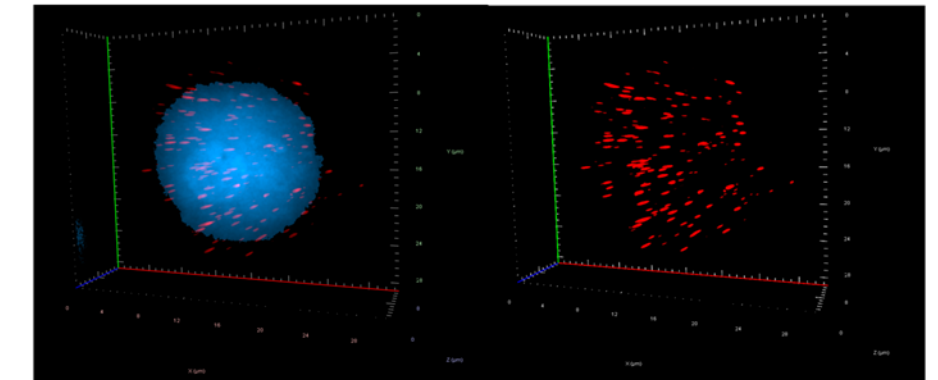
12 months



18 months

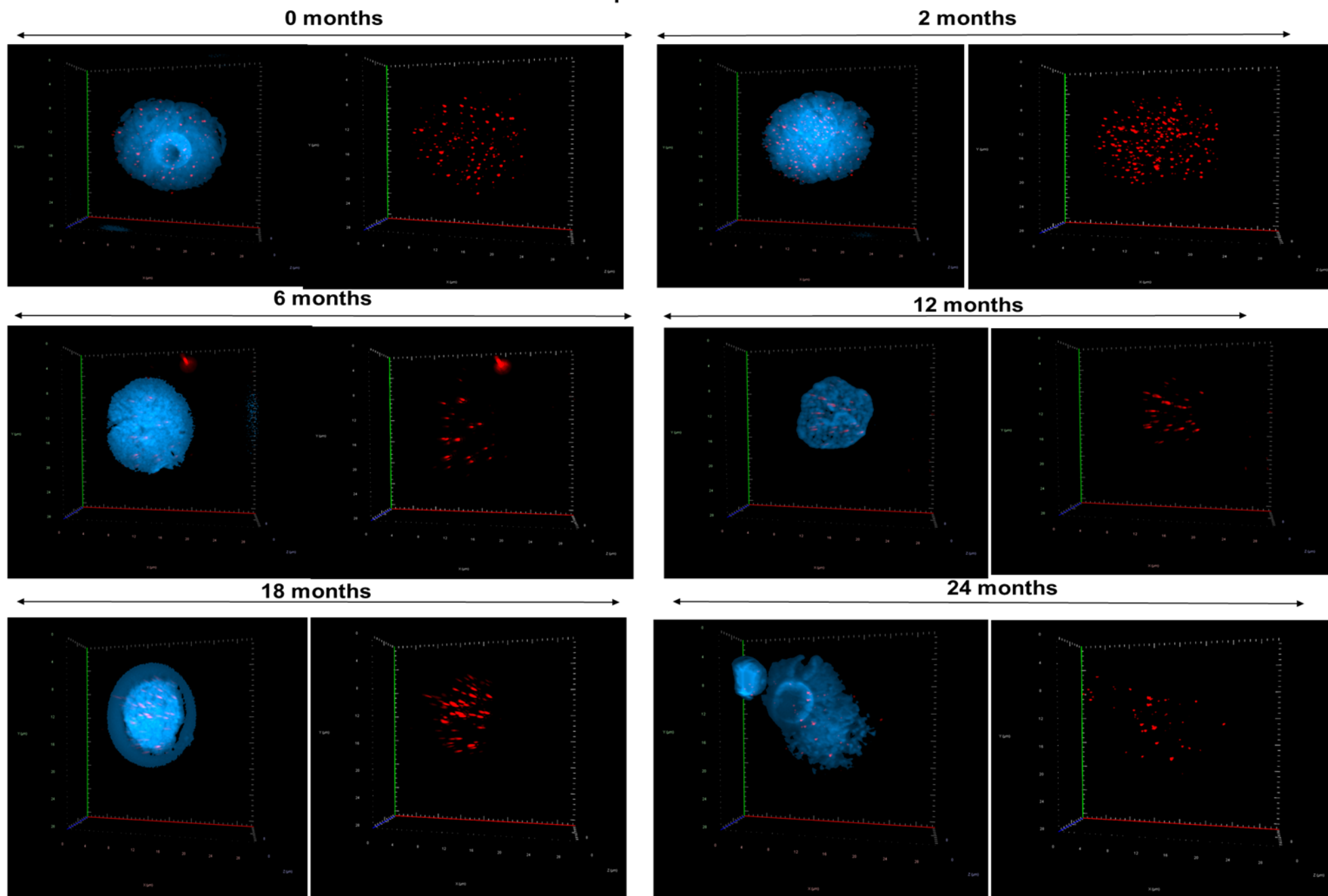


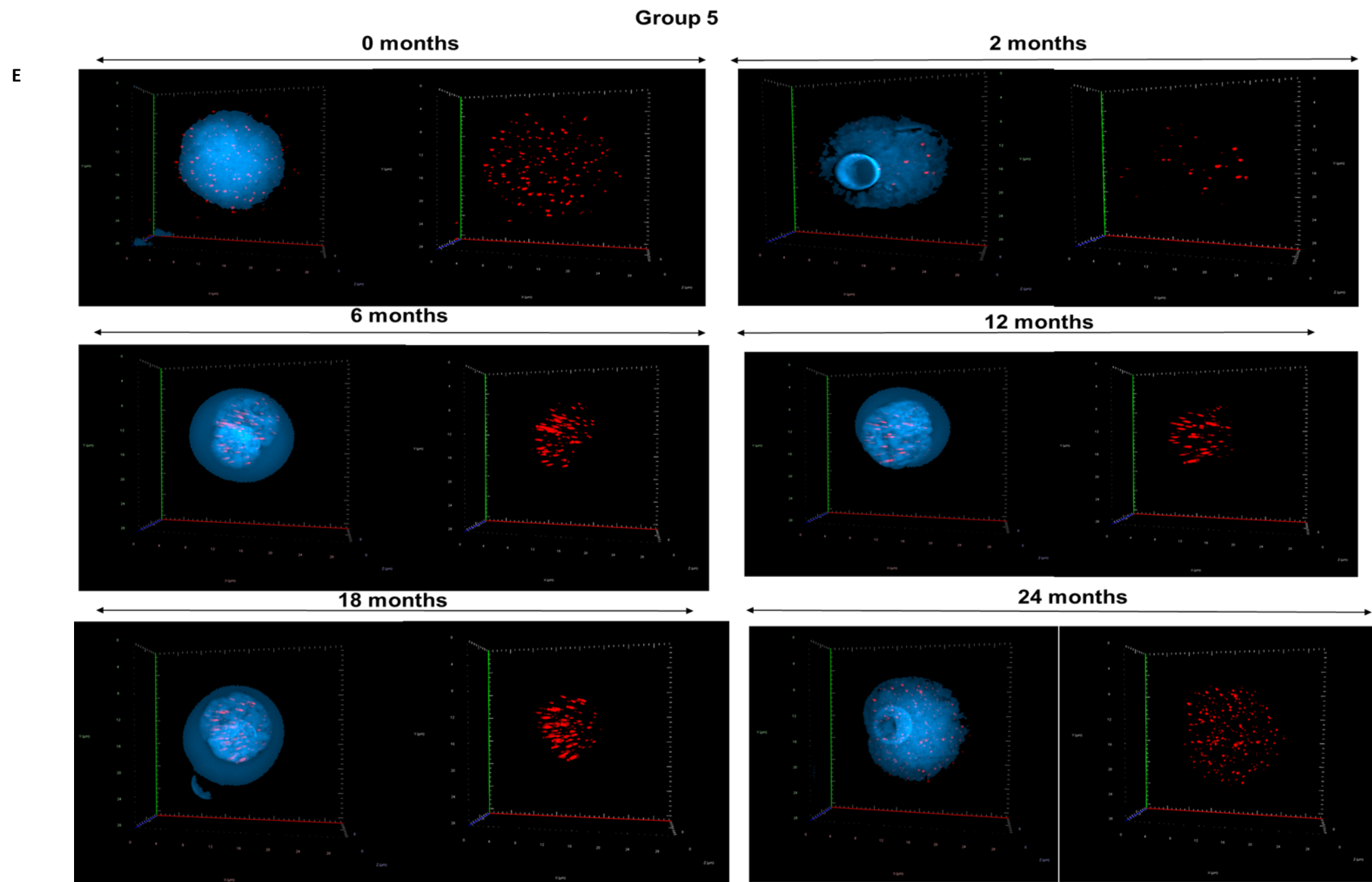
24 months



D

Group 4





Supplementary Figure 3. Example of a circulating tumor cell from a high-risk localized prostate cancer patient captured on top of a filter pore for each time point. Three-dimensional representation of a CTC with the telomeres labeled with telomere-specific Cy3-labeled probe (red) and Merge between telomeres; and the counterstained DAPI (blue).