C. A. Patient Summary Patient Study Based on Lesion Graph

Lesion Count According to Classification

Time Layer	complex	disappeared	lone	merged	new	persistent	split
0	0	0	5	0	11	0	0
1	0	1	0	0	1	10	0
2	0	1	0	0	3	10	0
3	0	5	0	0	0	8	0
4	0	1	0	0	1	7	0
5	0	2	0	0	3	5	1
6	0	3	2	1	1	5	0
7	0	2	0	0	0	4	1
8	0	0	1	0	0	7	0

Tracking the Changes in the Total Volume of the Tumors From One Scan to the Previous One

Time Stamp	Total Volume [cm³]	Volume Difference Percentage	Volume Difference [cm³]
0	16.9	-	-
1	1.46	-91%	-15.44
2	1.64	+12%	+0.17
3	3.34	+104%	+1.7
4	12.96	+288%	+9.62
5	15.79	+22%	+2.83
6	13.21	-16%	-2.58
7	12.1	-8%	-1.11
8	8.61	-29%	-3.49

Individual Lesion Changes

New Lesions

Lesion 9 appeared for the first time in the last scan.

Disappeared Lesions

Over time, 15 lesions disappeared.

- 1 lesion was last identified in 05.11.17.
- 1 lesion was last identified in 10.01.18.
- 5 lesions were last identified in 22.04.18.
- 1 lesion was last identified in 13.12.18.
- 2 lesions were last identified in 31.03.19.
- 3 lesions were last identified in 28.04.19.
- 2 lesions were last identified in 14.01.20.
- 0 lesions were last identified in 07.04.20.

Lesions Appearing in Multiple Scans

• The History of Lesions 4, 6, 5

0.26 cm θ cm 3 0 cm θ .08 cm θ .7 cm θ .5 dm θ .91 cm θ 2 cm θ 2 cm θ 2 cm θ 3 0.174 θ 0.176 cm θ 1.16 cm θ 2 cm θ 3 cm θ 4 cm θ 4 cm θ 5 cm θ 4 cm θ 5 cm θ 4 cm θ 5 cm θ 6 cm θ 6 cm θ 6 cm θ 7 cm θ 9 c

05.11.1L07.01.2L28.04.1L38.12.3LB.03.2L89.04.1L49.01.0270.04.3210.05.20

Lesion volume has decreased by 5% from previous scan to current scan. Volume shows both increases and decreases over time from first scan to last scan.

Classification of connected component: complex.

• The History of Lesion 2

1.94 c0n34 cm7 cm2.91 c9n01 dr1n.71 cm44 c0n23 c0n29 cm³ $333(2)00(13 + 5)7(4)30(5)5\frac{15}{4}7(2)$ 437(2)

05.11.1107.0122804.112812.31803.289.04.1149.01.2070.04.321005.20

Lesion volume has decreased by 184% from previous scan to current scan. Volume shows both increases and decreases over time from first scan to last scan.

Classification of connected component: split.

• The History of Lesion 7

9.25 c0n98 cr0.5 cr0.72 c0n21 cm7 cm9.19 cr0.71 cr0.716 cm³ 10399 4 199 6 779 1076 6 00 8 + 9 189 6 64 7

05.11.1107.01.2128.04.1128.12.3128.03.248.04.1149.01.0270.04.3210.05.20

Lesion volume has decreased by 64% from previous scan to current scan. Volume shows both increases and decreases over time from first scan to last scan.

Classification of connected component: linear.

• The History of Lesion 3

0.16 c0m22 c0m28 c5m25 c1m94 cm3

5 279 6 31 1171 4 29 3

05.11.1107.01.2128.04.1128.12.3128.03.249.04.1149.01.0270.04.3210.05.20

Lesion volume has decreased by 752% from previous scan to current scan. Volume shows both increases and decreases over time from first scan to last scan.

Classification of connected component: linear.

• The History of Lesion 8

0.17 cm/1 cm/35 cm3



05.11.1107.012028.04.1138.12.3138.03.249.04.1149.01.0270.04.3210.05.20

Lesion volume has decreased by 54% from previous scan to current scan. Volume shows both increases and decreases over time from first scan to last scan.

Classification of connected component: linear.