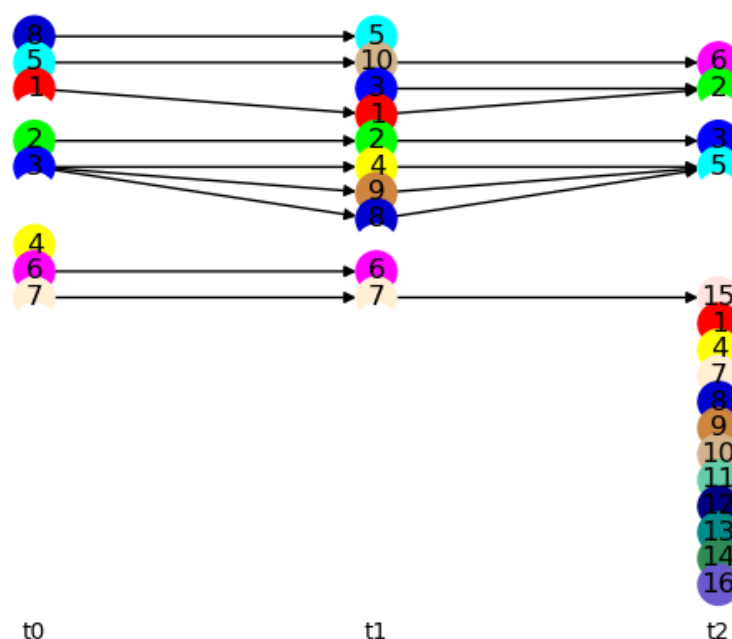


## A. S. S. Patient Summary

### Patient Study Based on Lesion Graph



Di Veroli B., Joskowicz L. A Graph Theoretic Approach for Analysis of Lesion Changes and Lesions Detection Review in Longitudinal Ontological Imaging, CASMIP Hebrew University, 2023

#### Lesion Counting According to Their Classification

Time Layer	complex	disappeared	lone	merged	new	persistent	split
0	0	0	0	0	7	0	1
1	0	1	0	0	1	9	0
2	0	2	11	2	0	3	0

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

One

Time Stamp	Total Volume [cm <sup>3</sup> ]	Volume Difference Percentage	Volume Difference [cm <sup>3</sup> ]
0	386.61	-	-
1	200.98	-48%	-185.63
2	319.73	+59%	+118.75



# Individual Lesion Changes

## New Lesions

Lesions 1, 4, 7, 8, 9, 10, 11, 12, 13, 14, 16 appeared for the first time in the last scan.

## Lesions that have disappeared over time

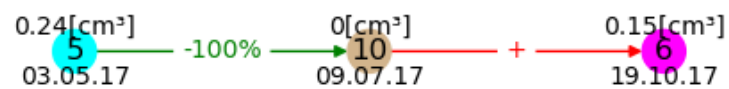
Over time, 3 lesions disappeared.

1 lesion was last identified in 03.05.17.

2 lesions were last identified in 09.07.17.

## Lesions appearing throughout several scans

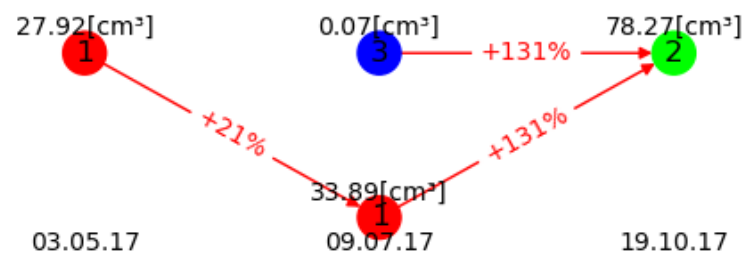
### • The History of Lesion 6



Lesion volume has decreased by 21% from previous scan to current scan. Volume consistently decreased over time by 51% from first scan to last scan.

Classification of connected component: linear.

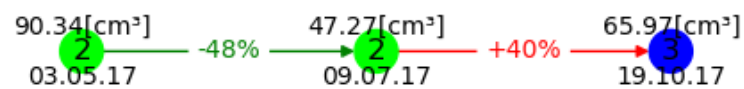
### • The History of Lesion 2



Lesion volume has decreased by 66% from previous scan to current scan. Volume consistently decreased over time by 13% from first scan to last scan.

Classification of connected component: merge.

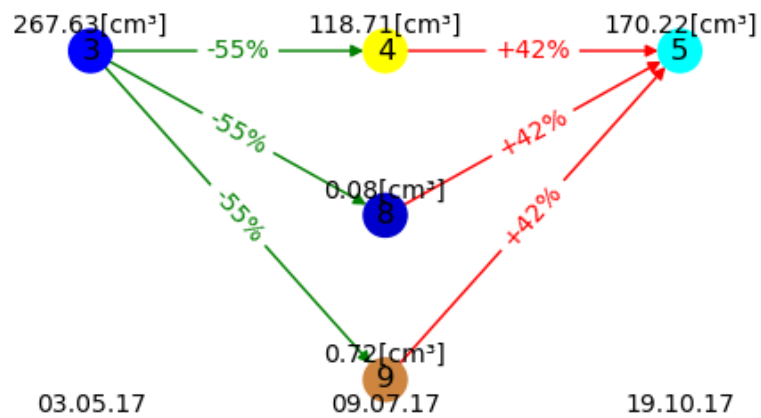
#### • The History of Lesion 3



Lesion volume has decreased by 98147% from previous scan to current scan. Volume consistently decreased over time by 75% from first scan to last scan.

Classification of connected component: linear.

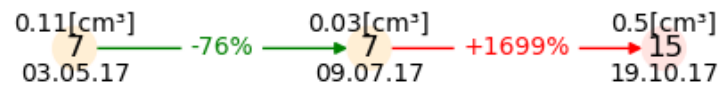
#### • The History of Lesion 5



Lesion volume has decreased by 176243% from previous scan to current scan. Volume consistently decreased over time by 69895% from first scan to last scan.

Classification of connected component: complex.

#### • The History of Lesion 15



No volume data available for the lesion from previous scans Volume consistently increased over time by 0% from first scan to last scan.

Classification of connected component: linear.