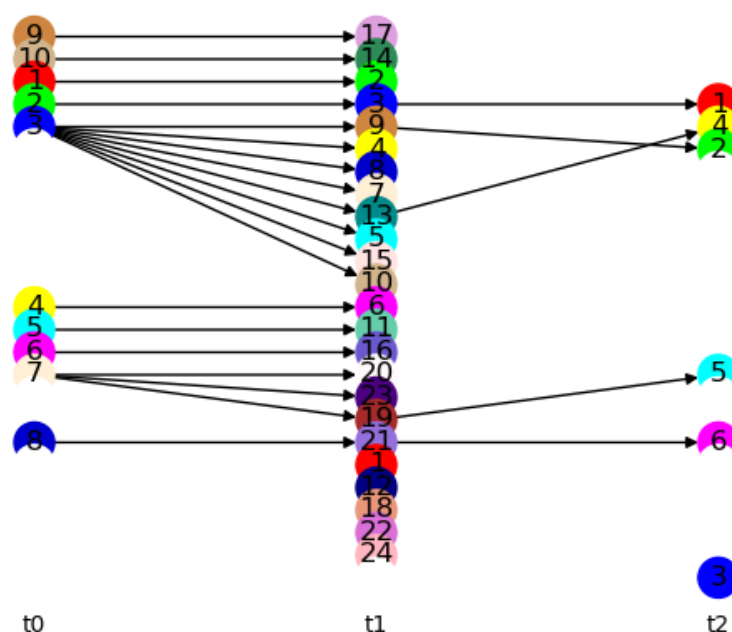


## B. T. Patient Summary

### 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, CSMIP Hebrew University, 2023

**Lesion Counting According to Their Classification**

Time Layer	complex	disappeared	lone	merged	new	persistent	split
0	0	0	0	0	8	0	2
1	0	0	5	0	0	19	0
2	0	19	1	0	0	5	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	51.14	-	-
1	67.0	+31%	+15.86
2	1.09	-98%	-65.9



# Individual Lesion Changes

## New Lesions

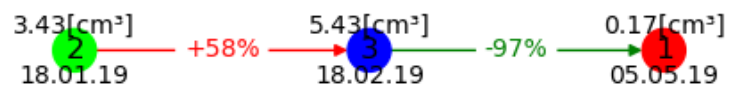
Lesion 3 appeared for the first time in the last scan.

## Lesions that have disappeared over time

Over time, 19 lesions disappeared.  
They were last identified in 18.02.19.

## Lesions appearing throughout several scans

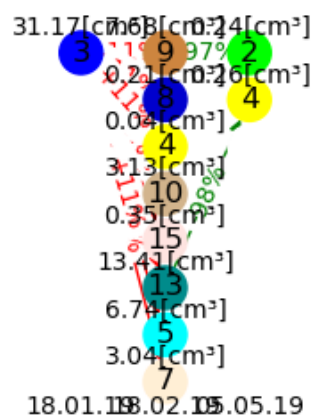
### • The History of Lesion 1



Lesion volume has decreased by 327% from previous scan to current scan. Volume consistently decreased over time by 60% from first scan to last scan.

Classification of connected component: linear.

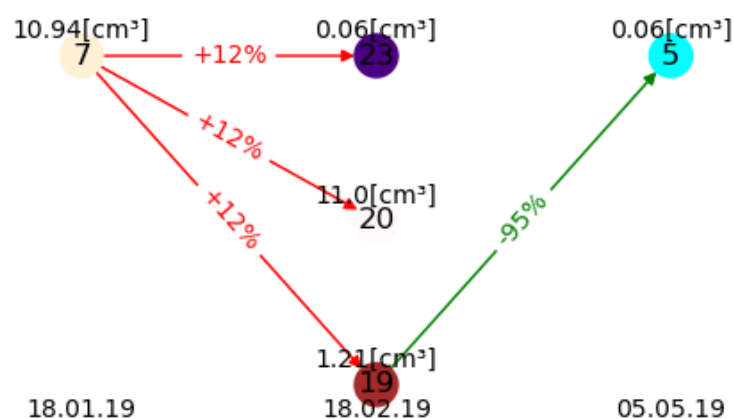
### • The History of Lesions 2, 4



Lesion volume has decreased by 63% from previous scan to current scan. Volume consistently decreased over time by 93% from first scan to last scan.

Classification of connected component: split.

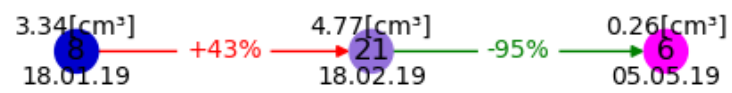
#### • The History of Lesion 5



Lesion volume has decreased by 99% from previous scan to current scan. Volume consistently increased over time by 90% from first scan to last scan.

Classification of connected component: split.

#### • The History of Lesion 6



Lesion volume has decreased by 81% from previous scan to current scan. Volume consistently increased over time by 498% from first scan to last scan.

Classification of connected component: linear.