

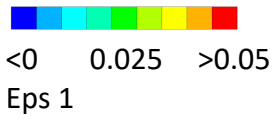
Supplementary Material

For each spine segment (ID)

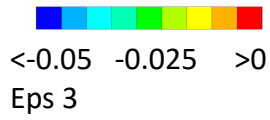
- Maximum and minimum principal strains were reported in the vertical section where failure occurred,
- Vertical section of the microCT scans of the vertebrae before (red) and after (green) failure were overlapped in order to highlight the failure location. Regions that overlap in the two images are reported in yellow.
- Frequency plots of the maximum and minimum principal strains for each spine segment, splitting between the metastatic (orange) and the control (blue) vertebrae were reported.

ID 9

Maximum Principal Strain

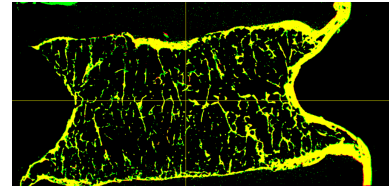
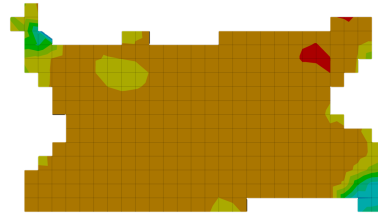
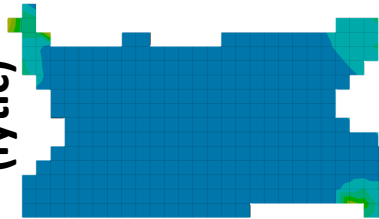


Minimum Principal Strain

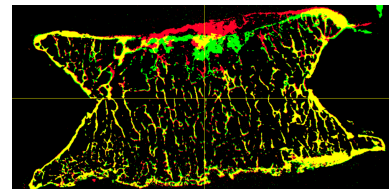
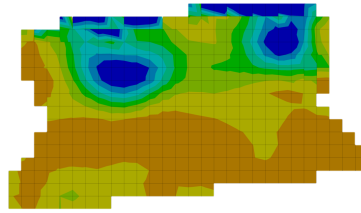
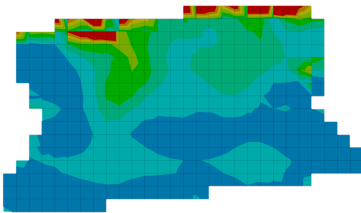


Pre vs Post failure

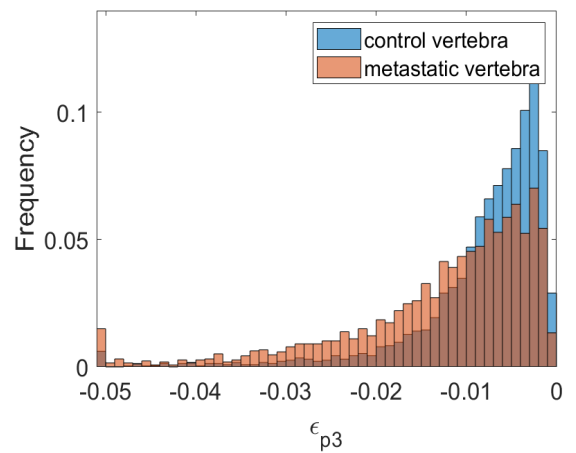
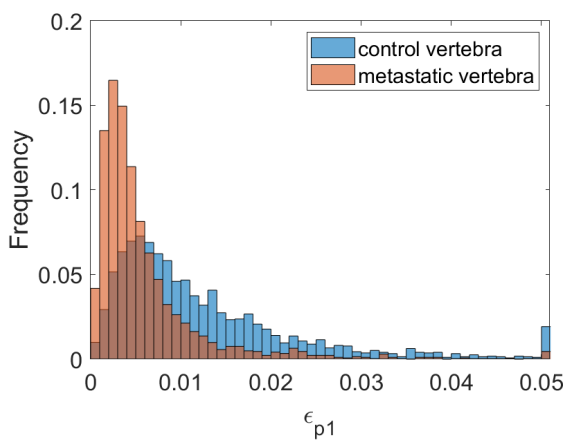
Metastatic Vertebra
(lytic)



Control Vertebra

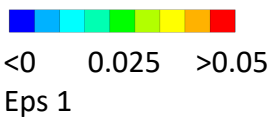


Metastatic vertebra vs
Control vertebra

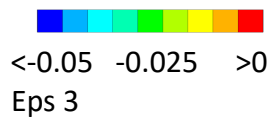


ID 10

Maximum Principal Strain

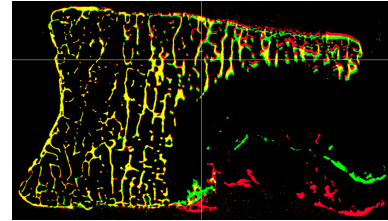
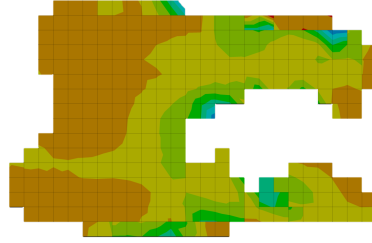
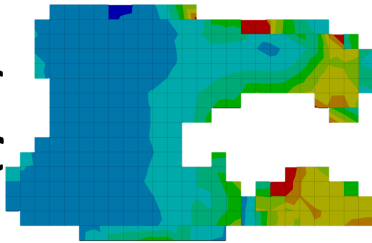


Minimum Principal Strain

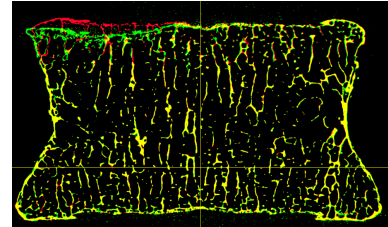
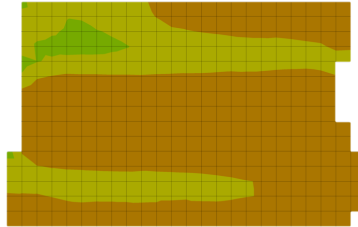
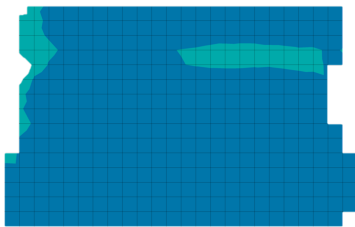


Pre vs Post failure

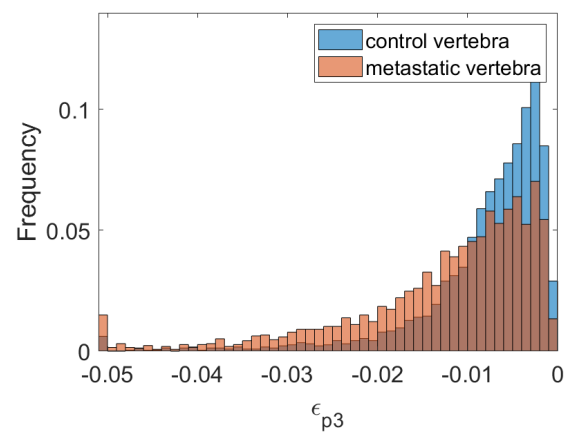
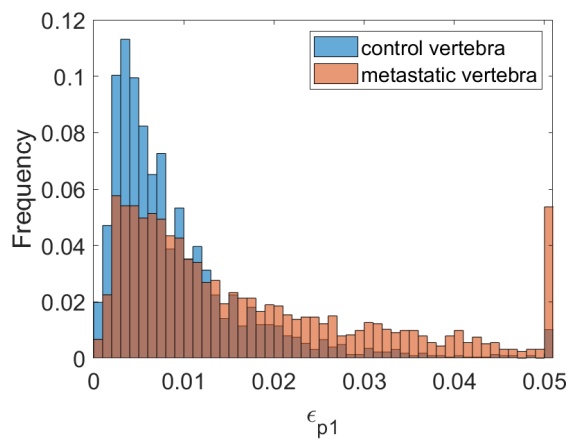
Metastatic Vertebra
(lytic)



Control Vertebra

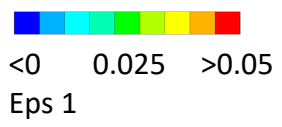


Metastatic vertebra vs
Control vertebra

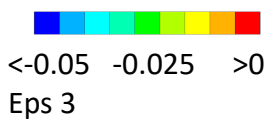


ID 11

Maximum Principal Strain

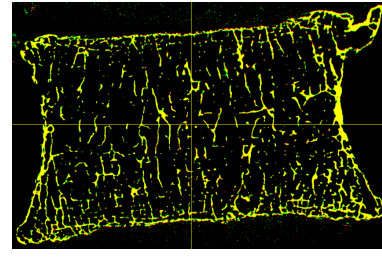
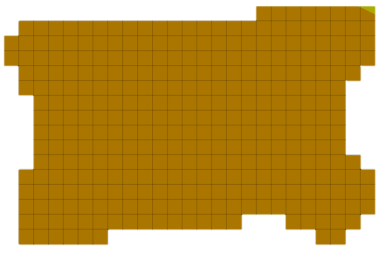
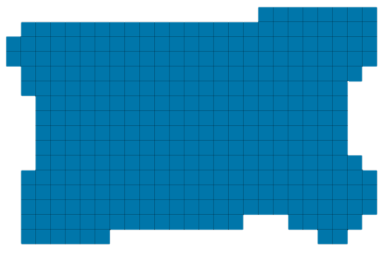


Minimum Principal Strain

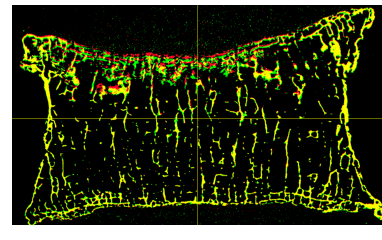
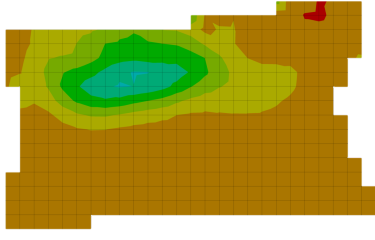
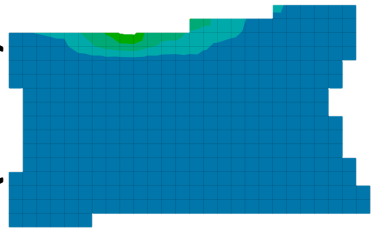


Pre vs Post failure

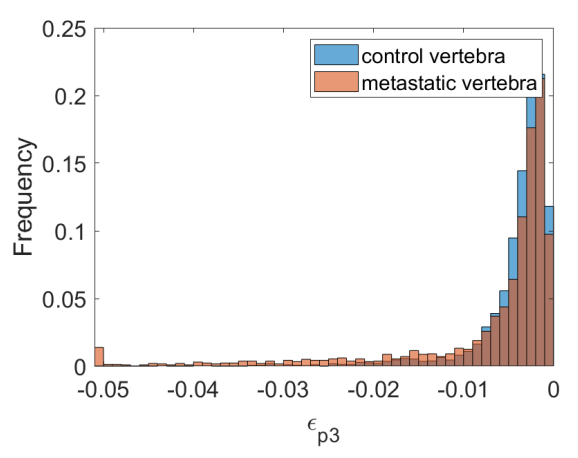
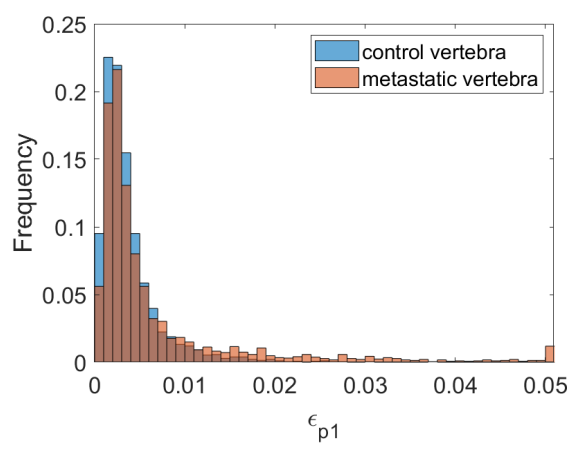
Control Vertebra



Metastatic Vertebra (mixed)

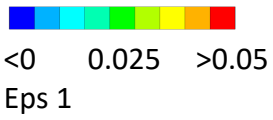


Metastatic vertebra vs Control vertebra

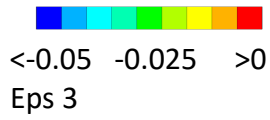


ID 12

Maximum Principal Strain

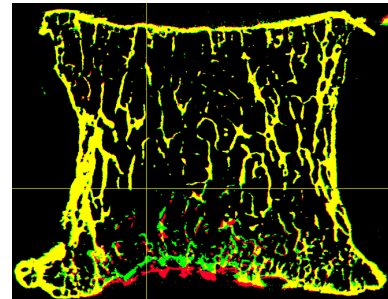
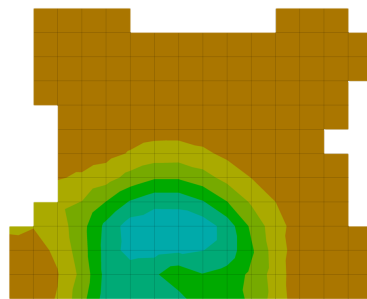
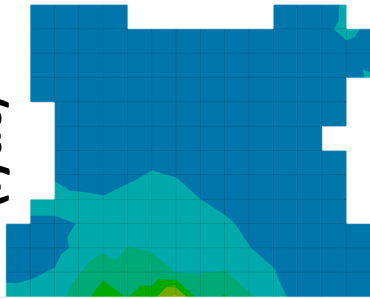


Minimum Principal Strain

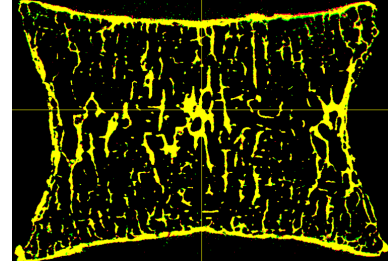
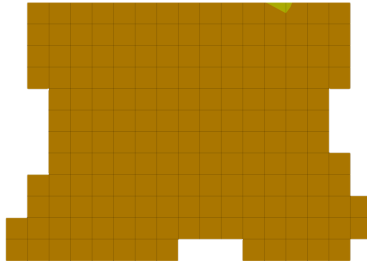
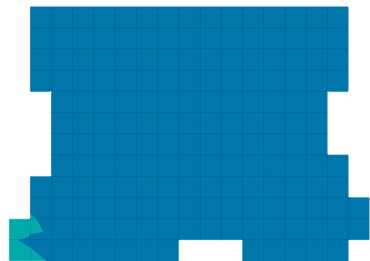


Pre vs Post failure

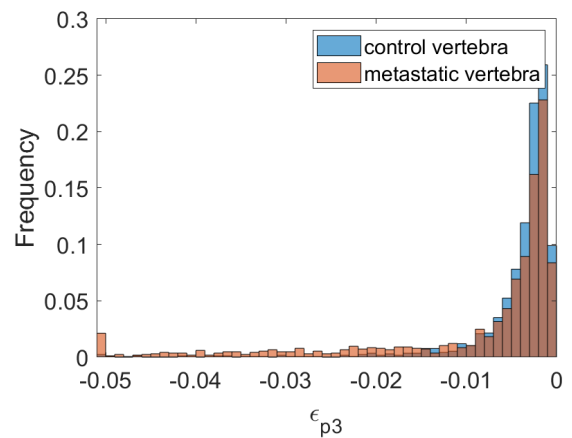
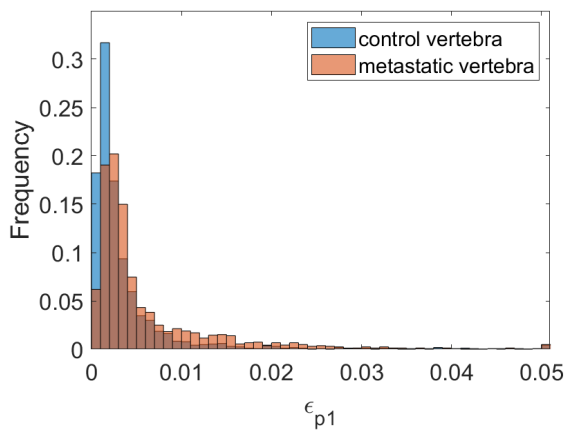
Metastatic Vertebra
(lytic)



Control Vertebra

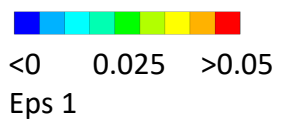


Metastatic vertebra vs
Control vertebra

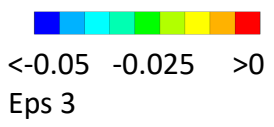


ID 13

Maximum Principal Strain

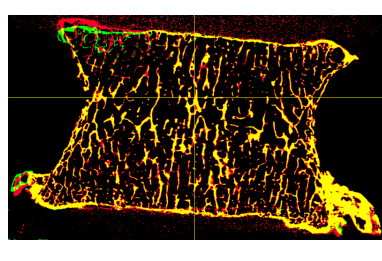
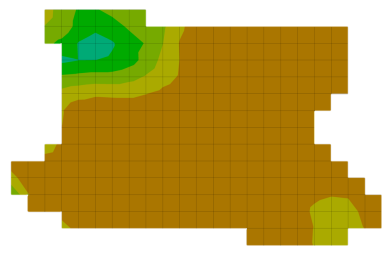
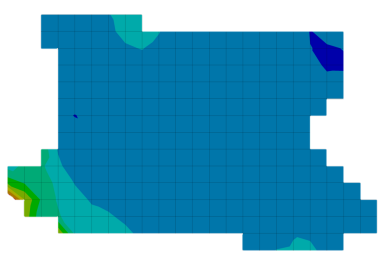


Minimum Principal Strain

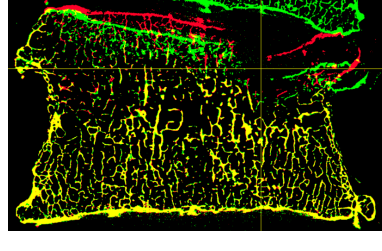
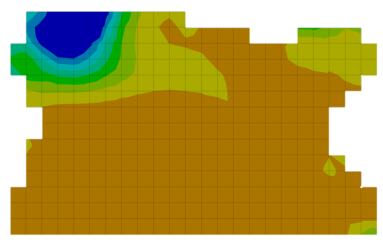
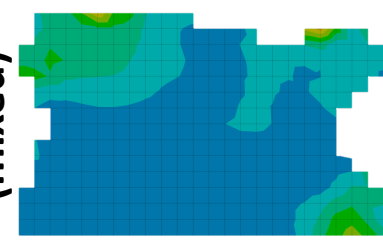


Pre vs Post failure

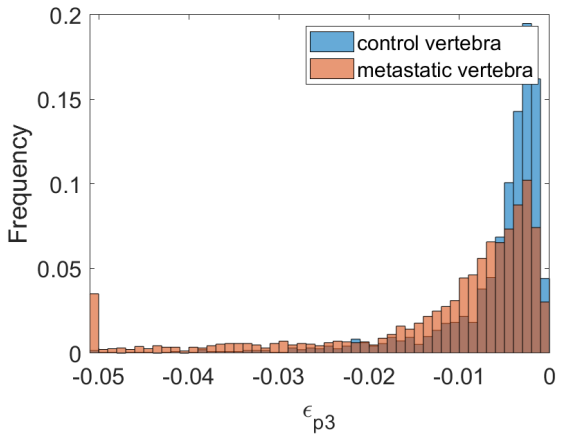
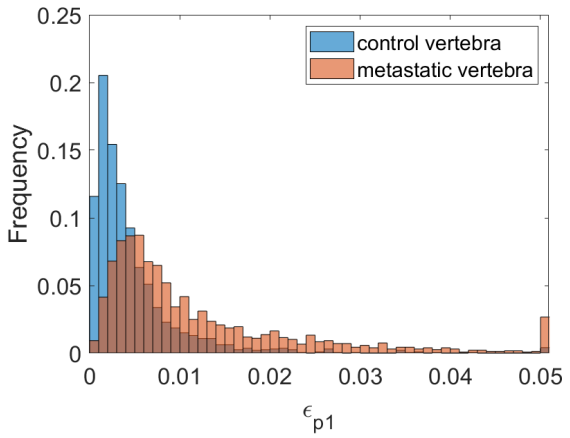
Control Vertebra



Metastatic Vertebra (mixed)

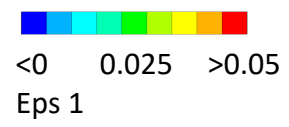


Metastatic vertebra vs Control vertebra

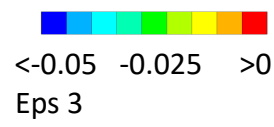


ID 15

Maximum Principal Strain

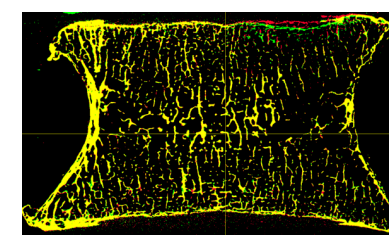
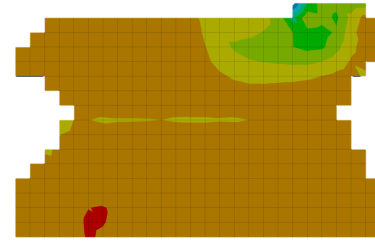
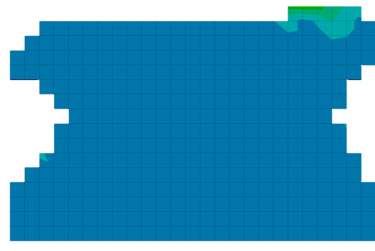


Minimum Principal Strain

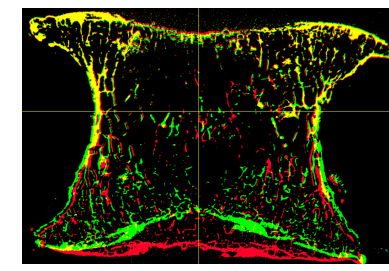
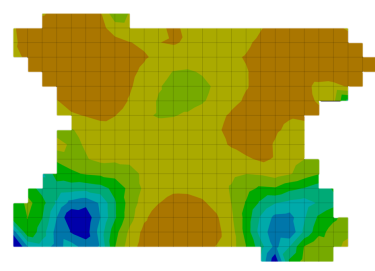
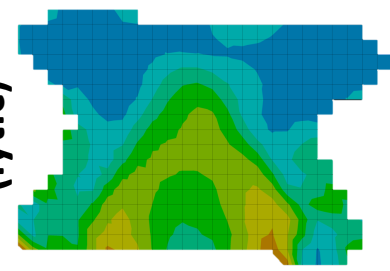


Pre vs Post failure

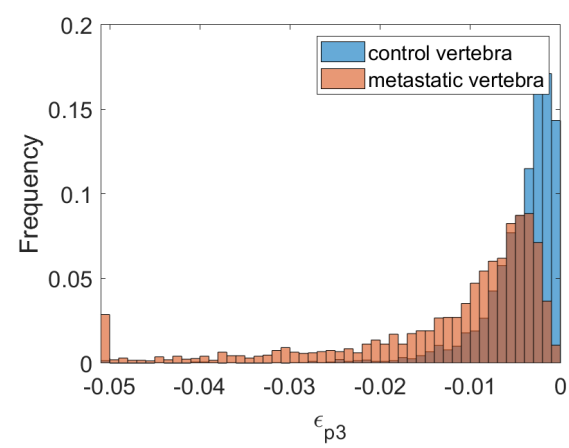
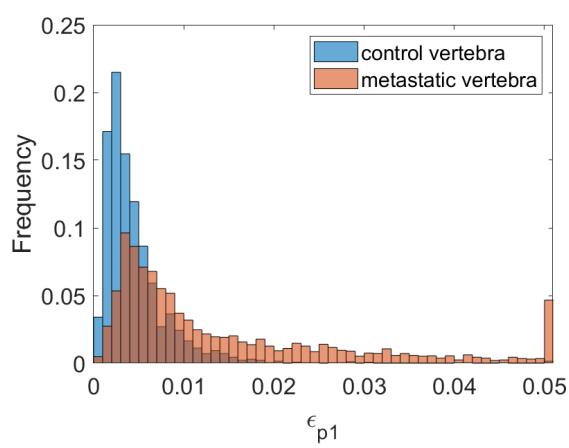
Control Vertebra



Metastatic Vertebra (lytic)

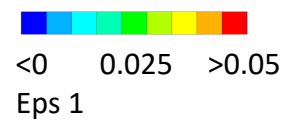


Metastatic vertebra vs Control vertebra

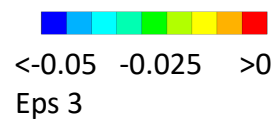


ID 18

Maximum Principal Strain

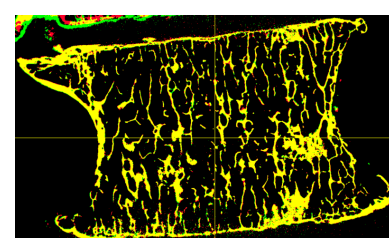
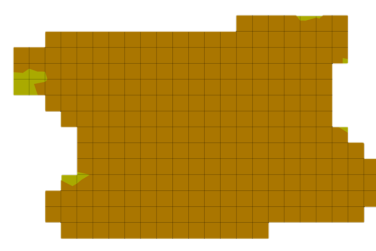
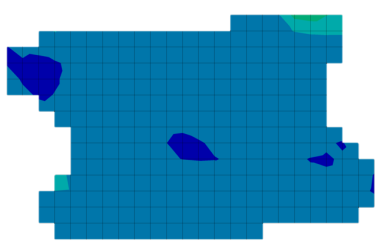


Minimum Principal Strain

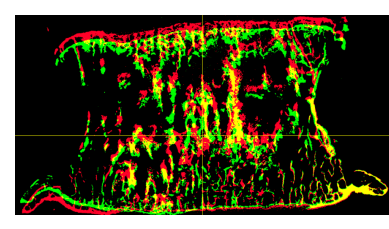
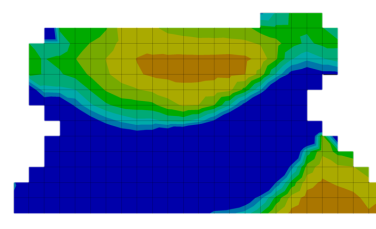
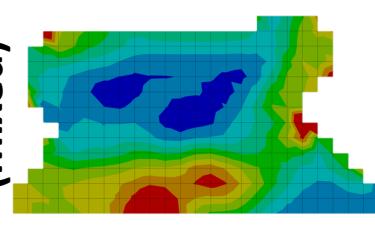


Pre vs Post failure

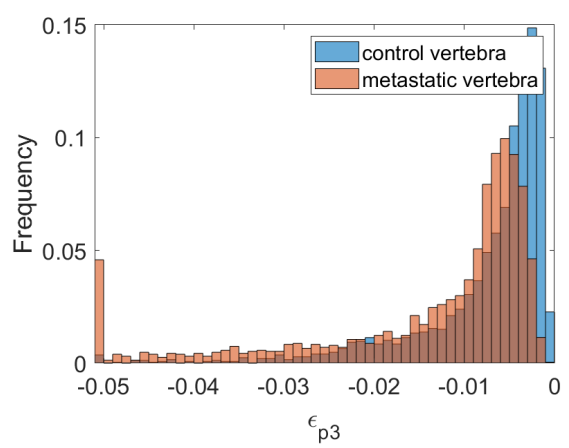
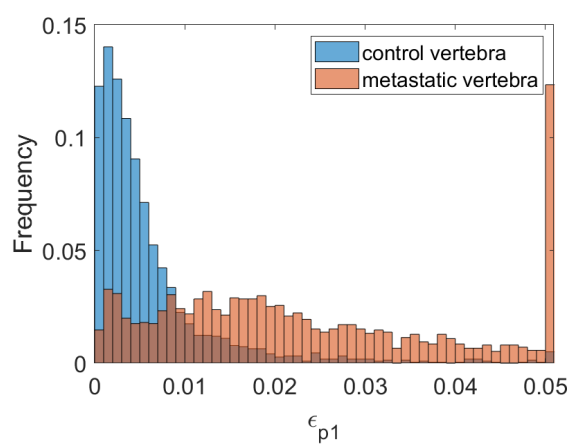
Control Vertebra



Metastatic Vertebra (mixed)

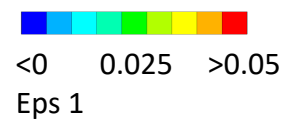


Metastatic vertebra vs Control vertebra

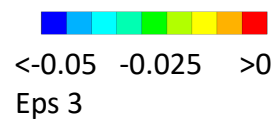


ID 19

Maximum Principal Strain

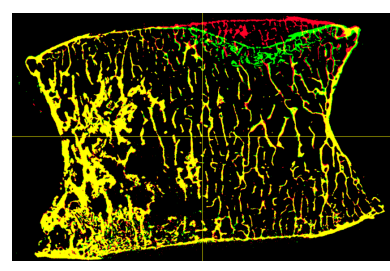
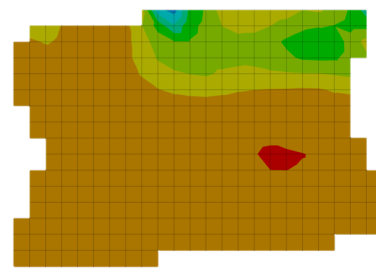
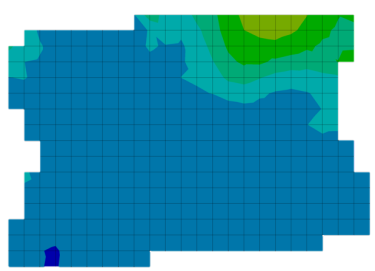


Minimum Principal Strain

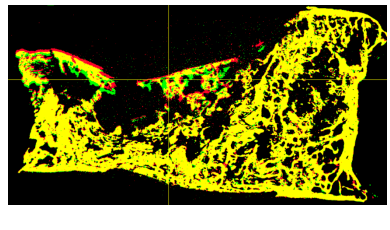
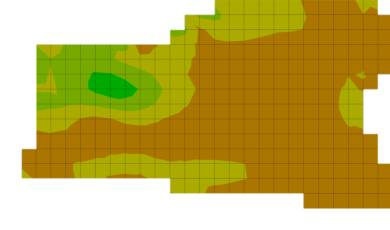
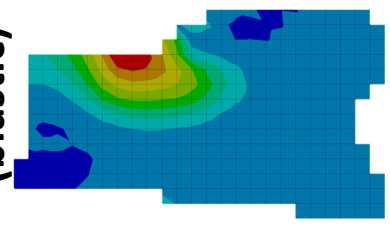


Pre vs Post failure

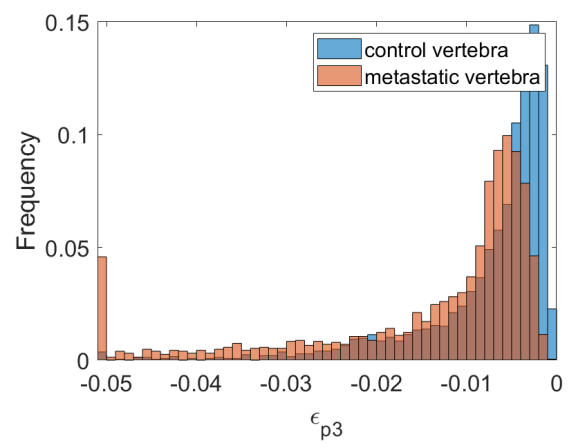
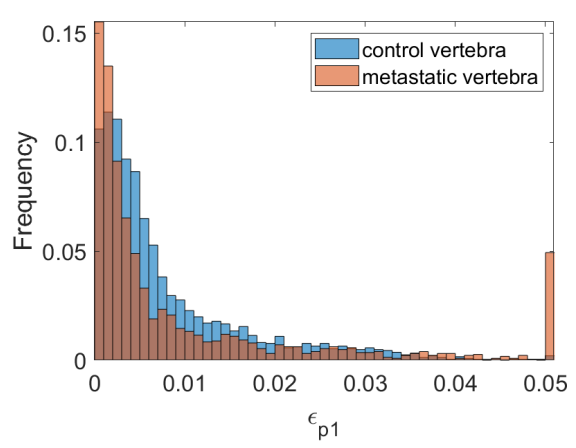
Control Vertebra



Metastatic Vertebra (blastic)

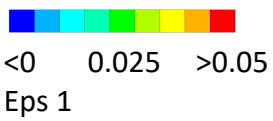


Metastatic vertebra vs Control vertebra

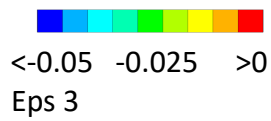


ID 25

Maximum Principal Strain

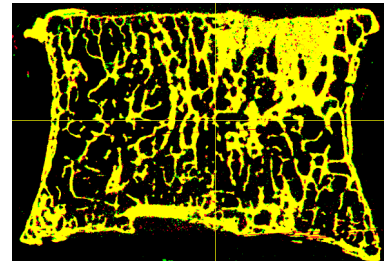
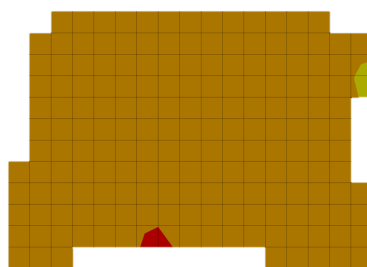
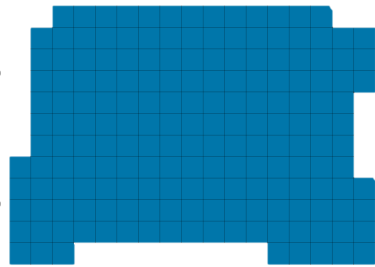


Minimum Principal Strain

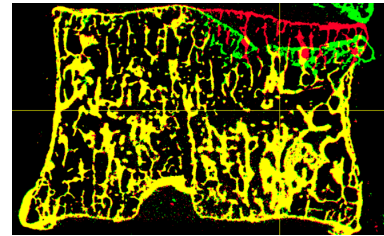
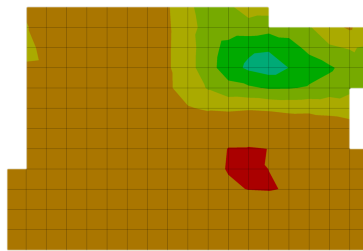
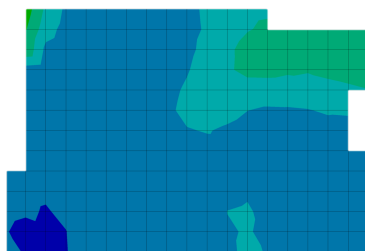


Pre vs Post failure

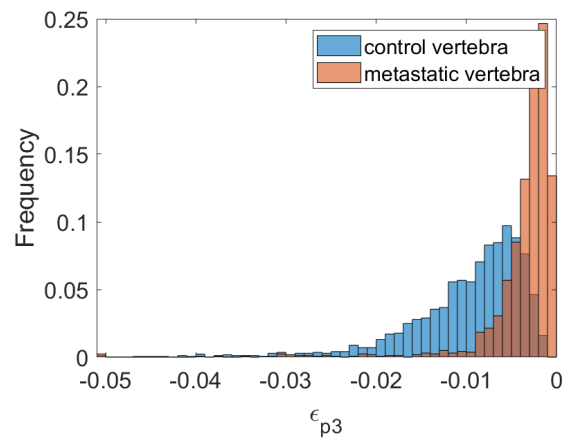
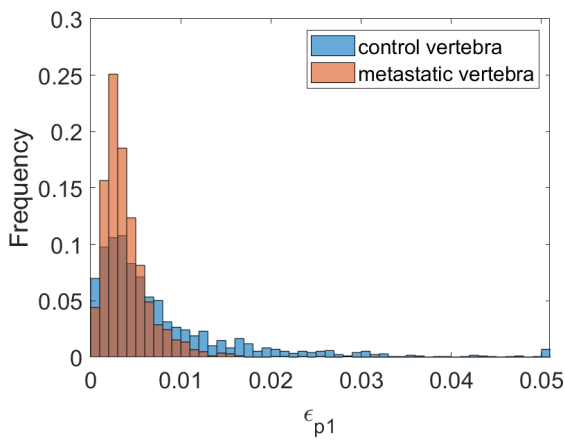
Metastatic Vertebra
(mixed)



Control Vertebra

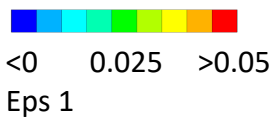


Metastatic vertebra vs
Control vertebra

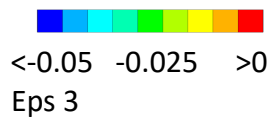


ID 26

Maximum Principal Strain

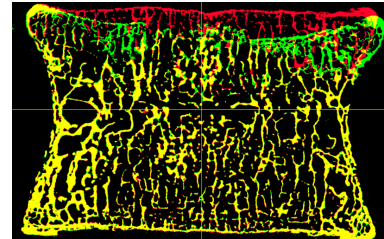
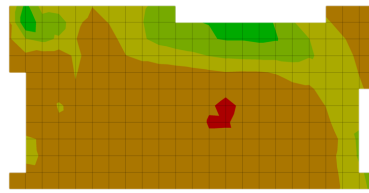
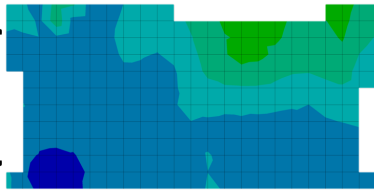


Minimum Principal Strain

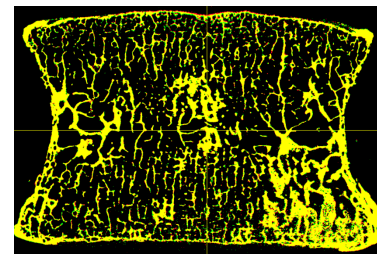
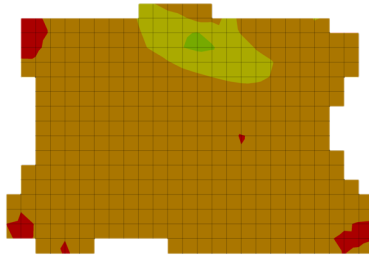
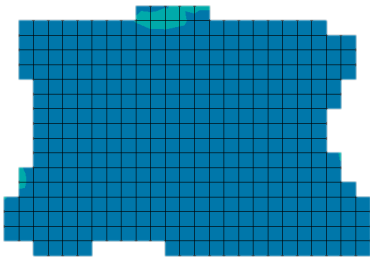


Pre vs Post failure

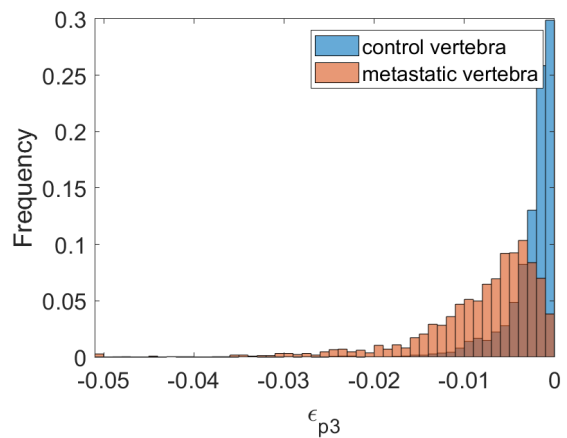
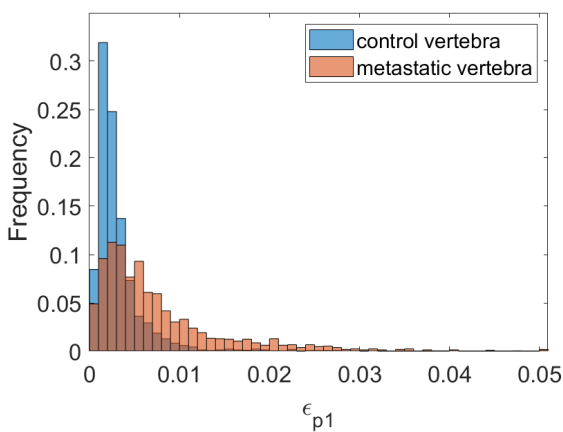
Metastatic Vertebra
(mixed)



Control Vertebra

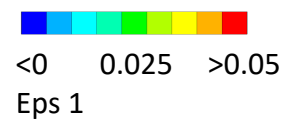


Metastatic vertebra vs
Control vertebra

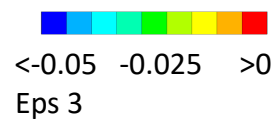


ID 29

Maximum Principal Strain

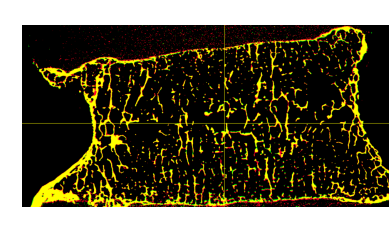
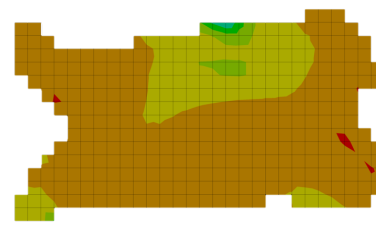
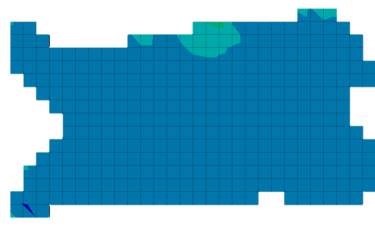


Minimum Principal Strain

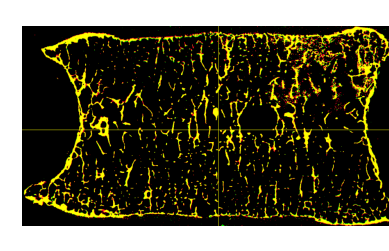
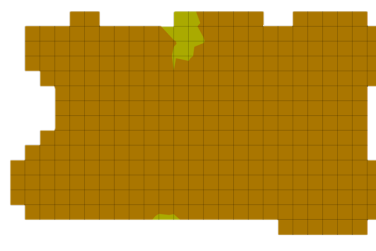
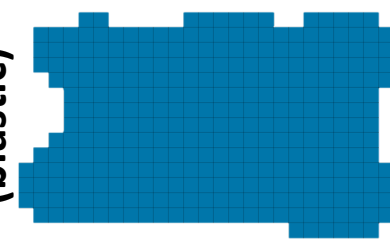


Pre vs Post failure

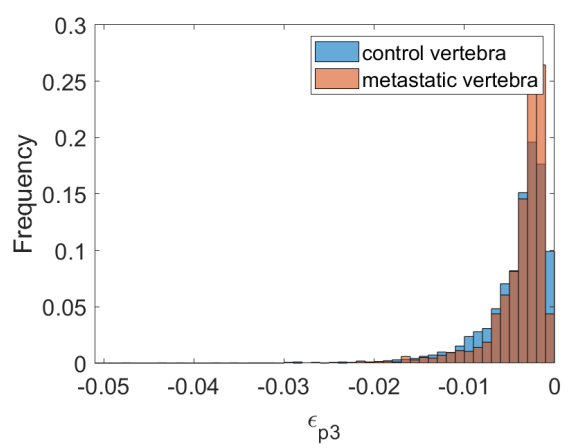
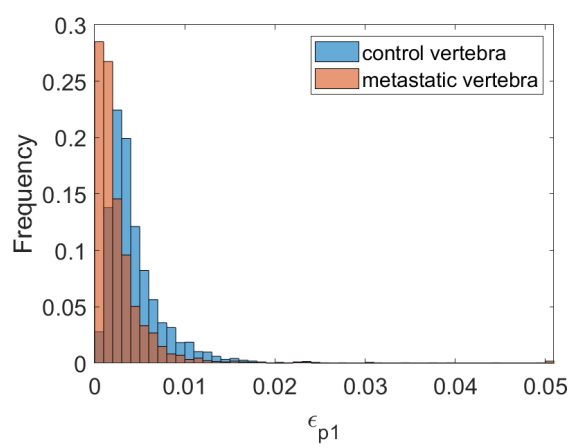
Control Vertebra



Metastatic Vertebra (blastic)

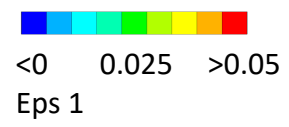


Metastatic vertebra vs Control vertebra

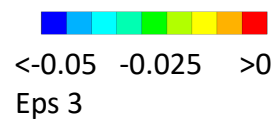


ID 30

Maximum Principal Strain

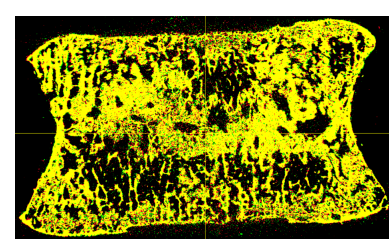
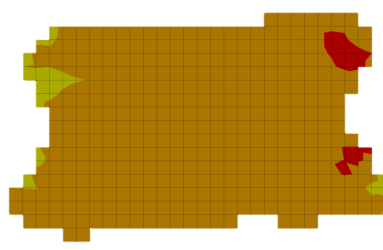
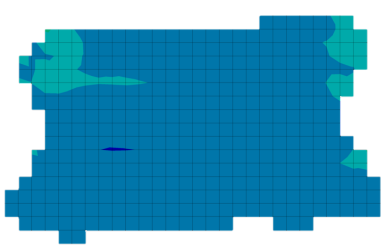


Minimum Principal Strain

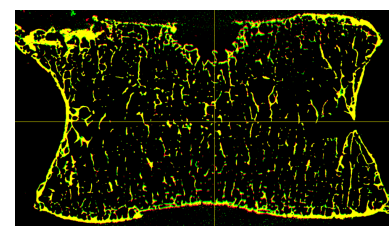
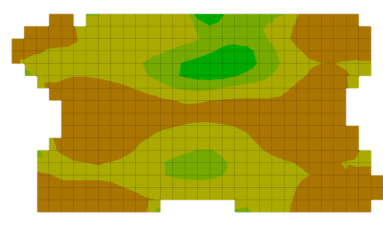
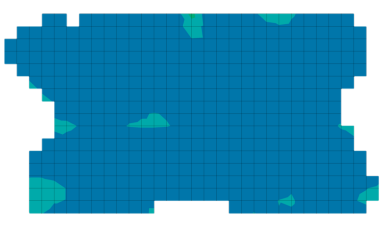


Pre vs Post failure

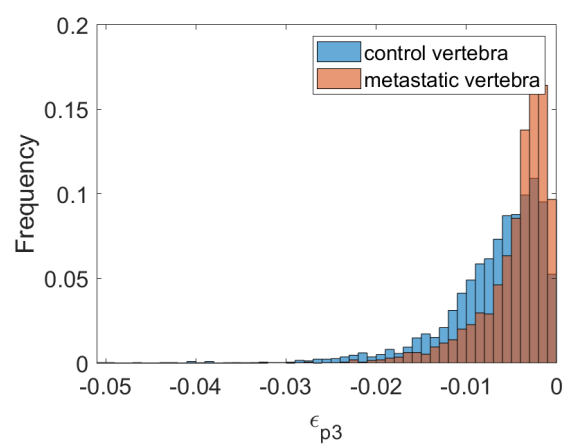
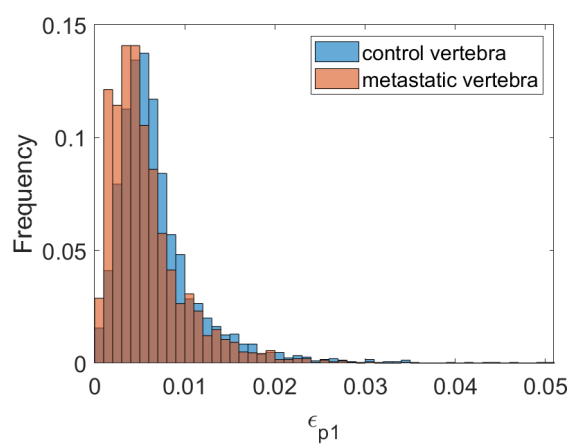
Metastatic Vertebra (blastic)



Control Vertebra

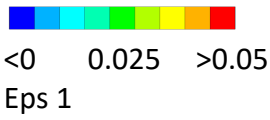


Metastatic vertebra vs Control vertebra

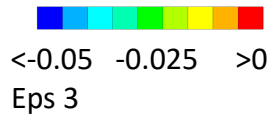


ID 31

Maximum Principal Strain

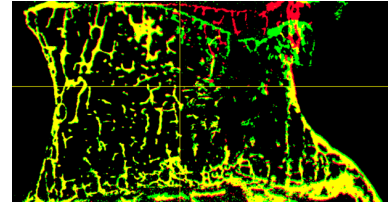
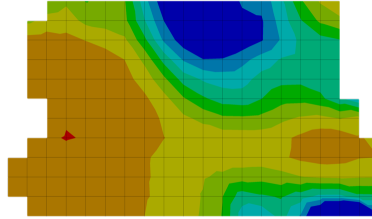
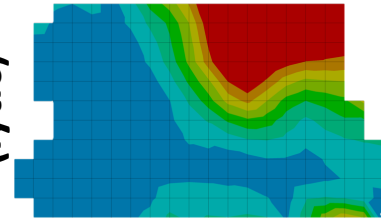


Minimum Principal Strain

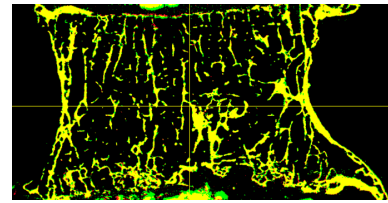
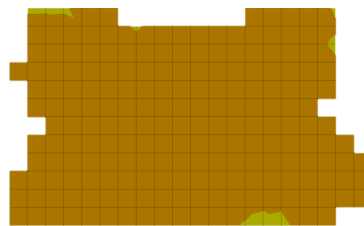
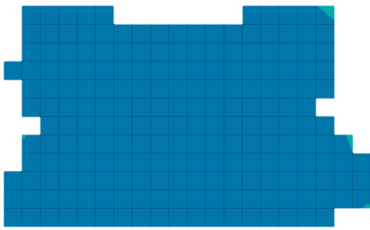


Pre vs Post failure

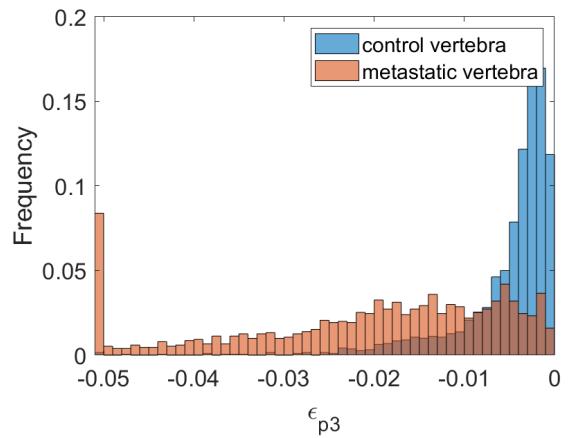
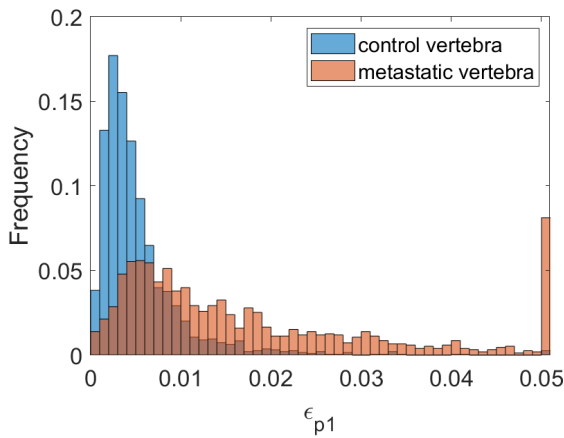
Metastatic Vertebra
(lytic)



Control Vertebra

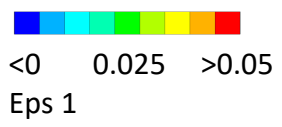


Metastatic vertebra vs
Control vertebra

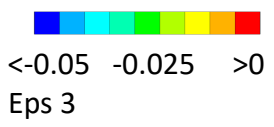


ID 33

Maximum Principal Strain

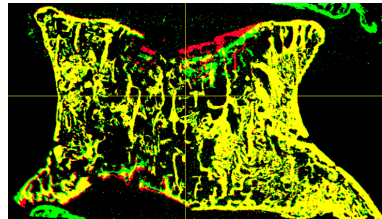
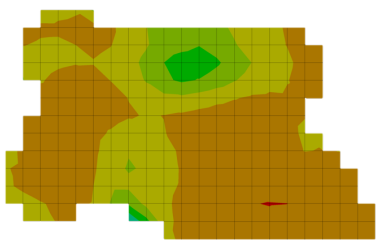
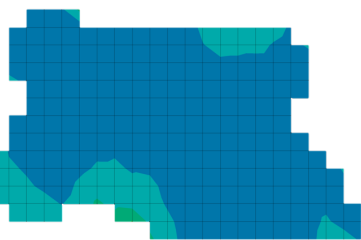


Minimum Principal Strain

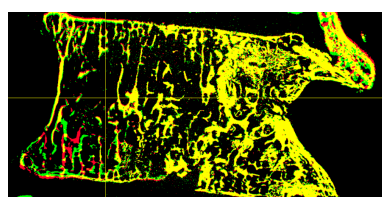
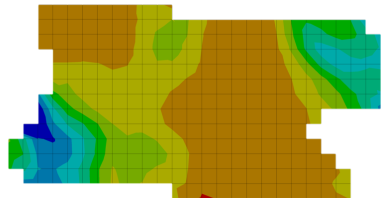
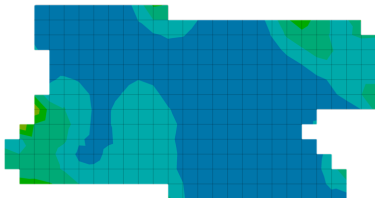


Pre vs Post failure

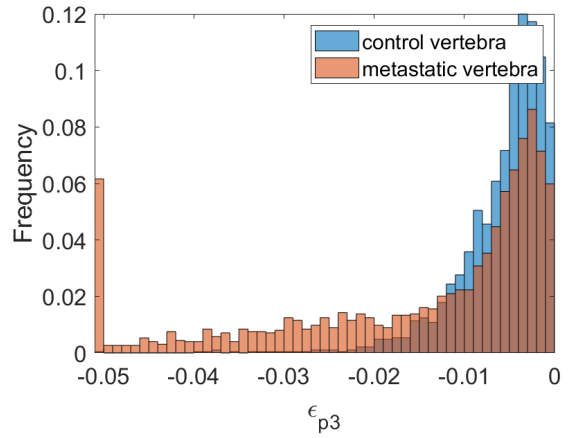
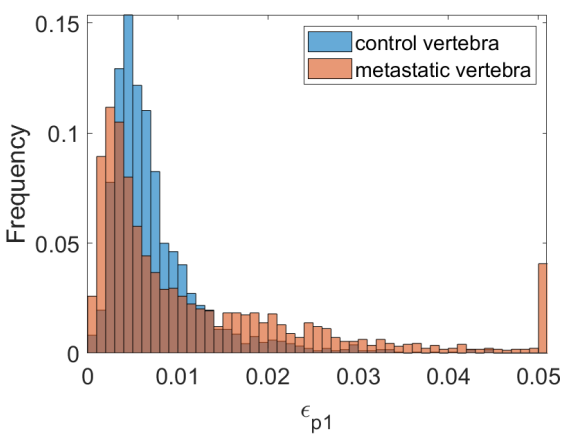
Metastatic Vertebra (Mixed)



Control Vertebra

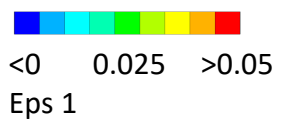


Metastatic vertebra vs Control vertebra

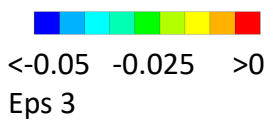


ID 35

Maximum Principal Strain

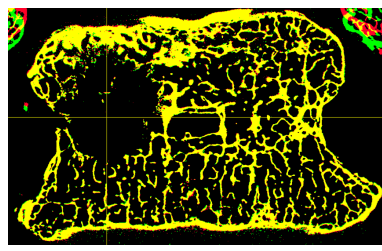
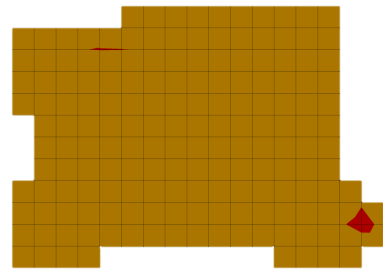
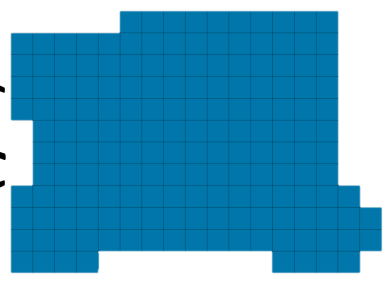


Minimum Principal Strain

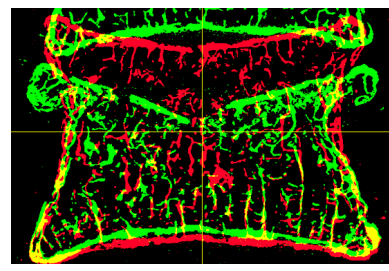
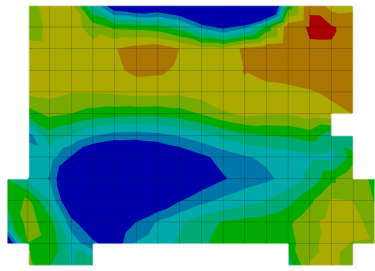
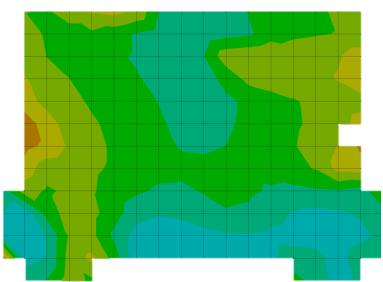


Pre vs Post failure

Metastatic Vertebra (lytic)



Control Vertebra



Metastatic vertebra vs Control vertebra

