

**Supplemental Figure 1: All MR images, depot and tissue reconstructions, and SC tissue thickness heatmaps from LVSC thigh, abdomen, and arm injection sites.** (Top row) Each image series ranges from naïve tissue/catheter placement through maximum injection volume (left to right) up to 10 mL cumulative injection in thigh and abdomen and 5 mL in the arm. (Second row) SC thickness heat maps of the area around the injection site demonstrate increasing thickness with volume (dark blue increasing to yellow, orange, and dark red sequentially; scales vary with each specific tissue locale). (Third and fourth rows) Reconstructed 3D images demonstrating top and side views of the 2 (green), 5 (blue), 10 (magenta) mL and post set removal (yellow) depots alone. (Bottom row) The 3D depot images within the ID/SC interface and SC/IM interface give context to depot location and topology within the tissue. Depot dimensions are not shown to scale between rows or between injection sites but meant to show relative depot shapes and locations; depot dimensions for each example site are shown to scale across columns of increasing volume.

# 009 Abdomen Left

Naive

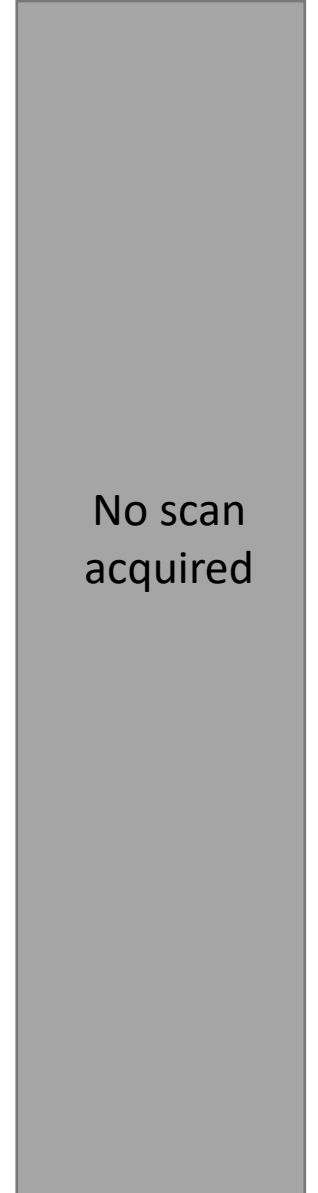
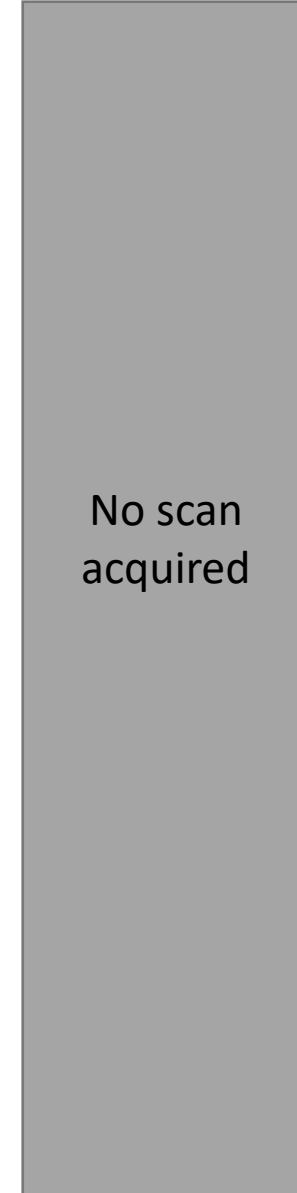
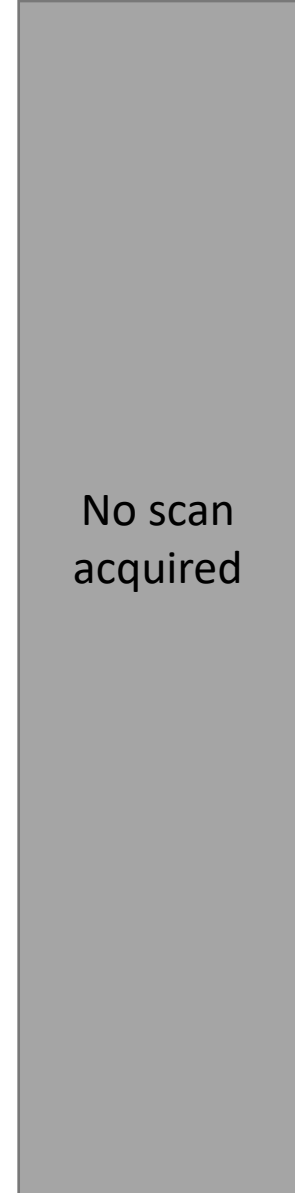
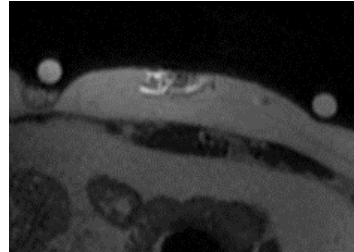
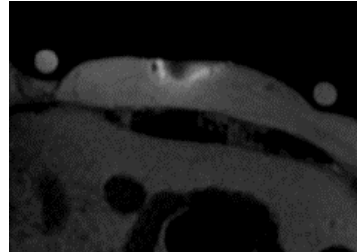
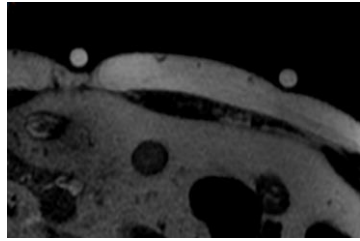
Cannula

2ml

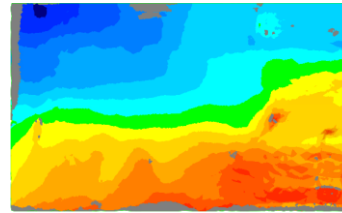
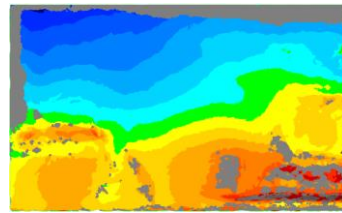
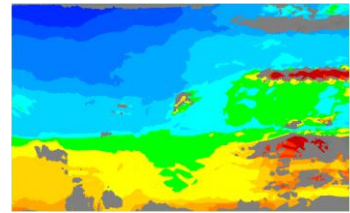
5ml

10ml

Post



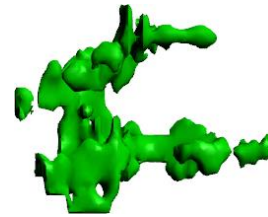
Thickness  
Units:[mm]



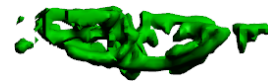
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 009 Abdomen Right

Naive

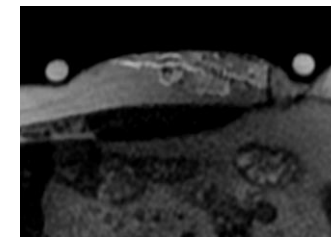
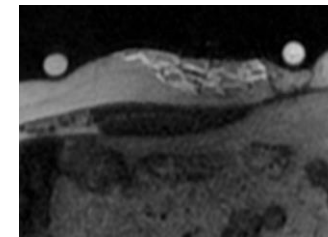
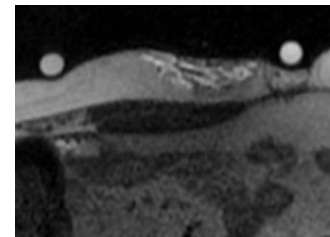
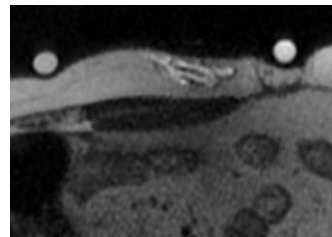
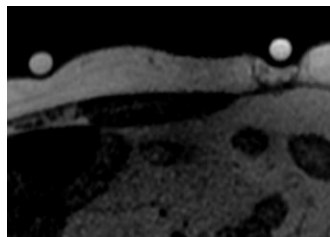
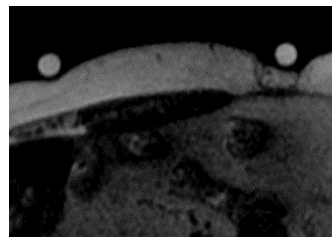
Cannula

2ml

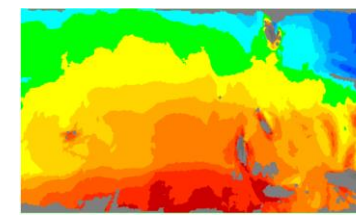
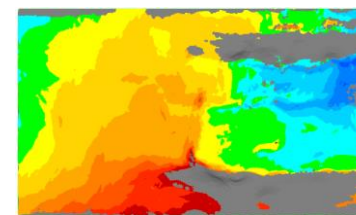
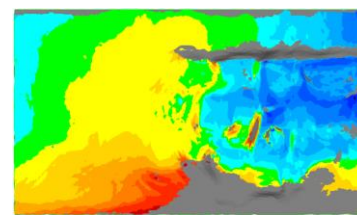
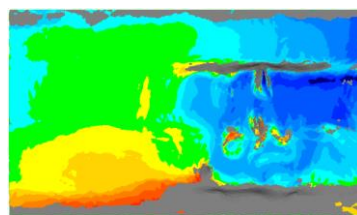
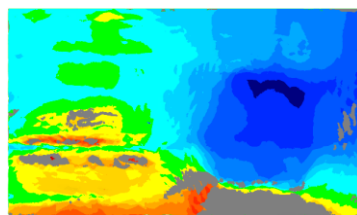
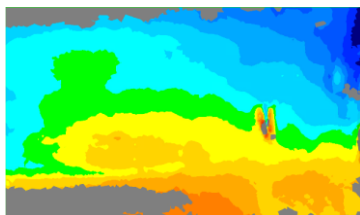
5ml

10ml

Post



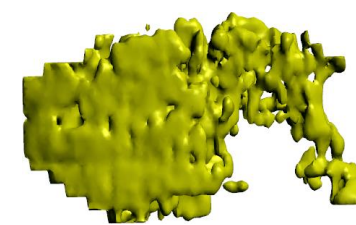
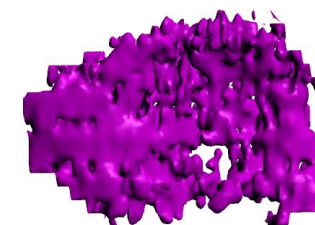
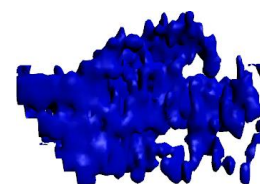
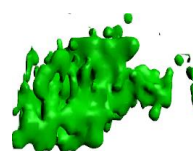
Thickness  
Units:[mm]



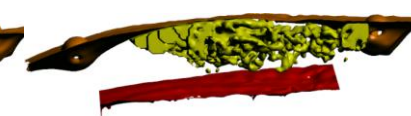
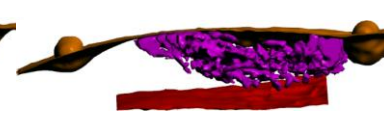
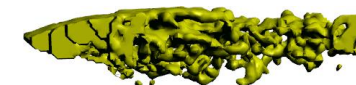
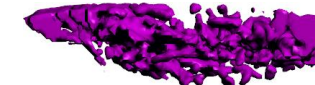
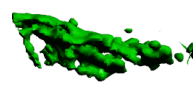
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 009 Thigh Left

Naive

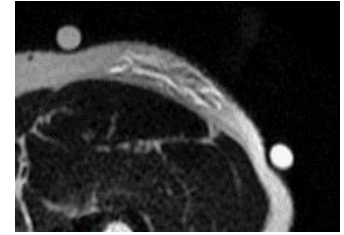
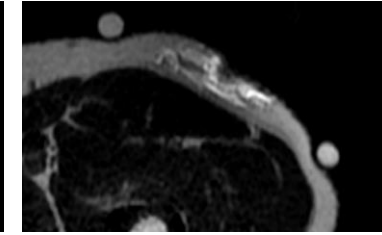
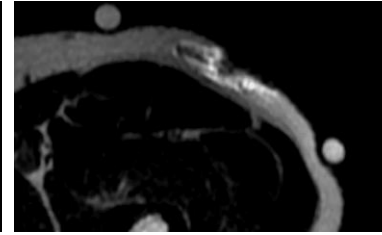
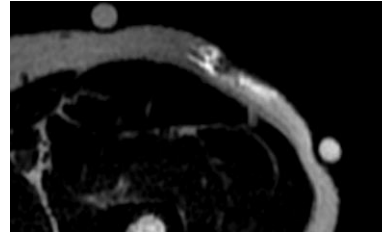
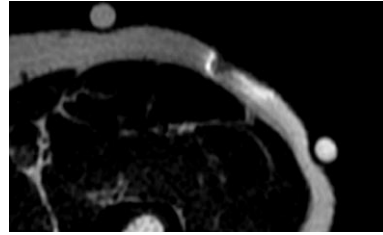
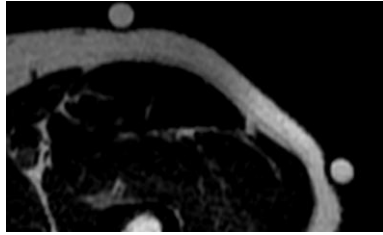
Cannula

2ml

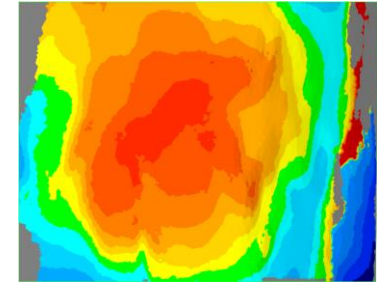
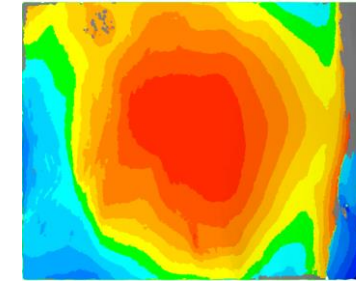
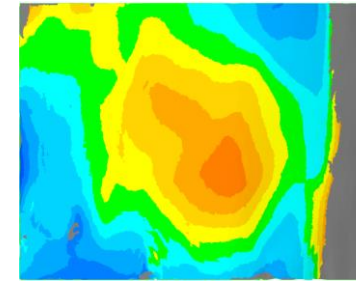
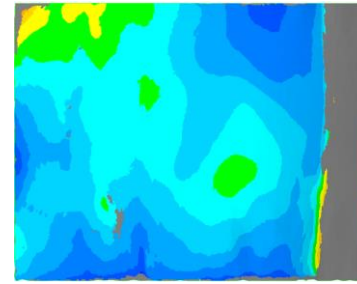
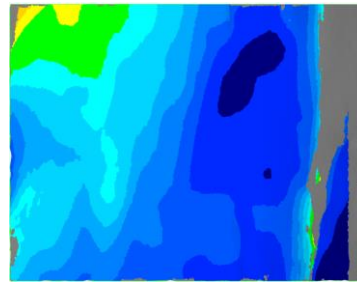
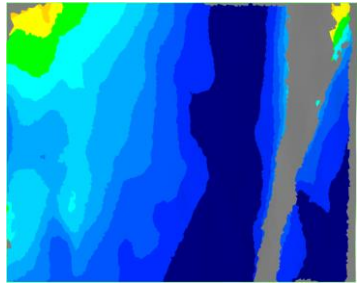
5ml

10ml

Post



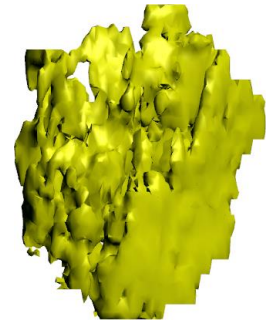
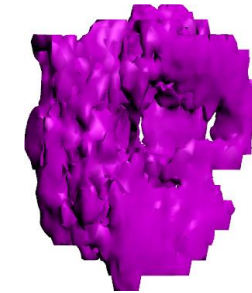
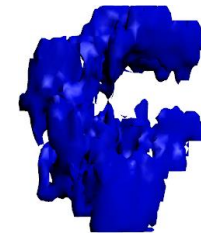
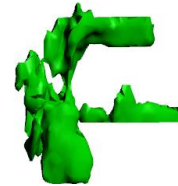
Thickness  
Units:[mm]



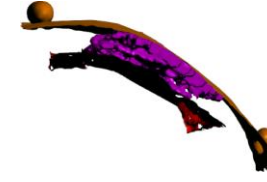
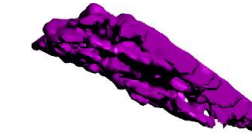
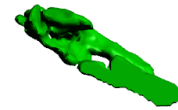
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View





# 009 Thigh Right

5A

Naive

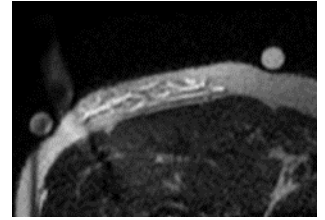
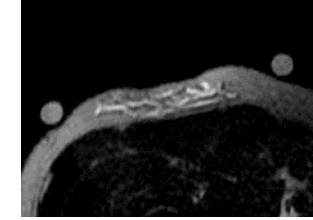
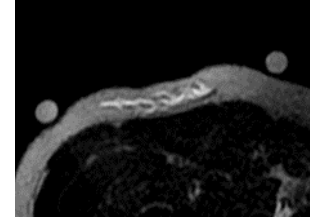
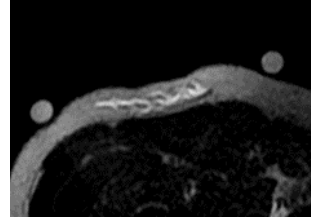
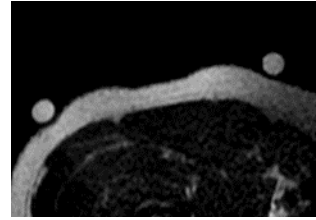
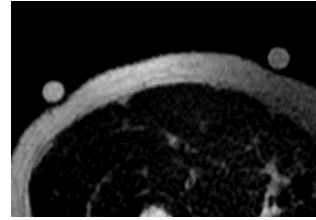
Cannula

2ml

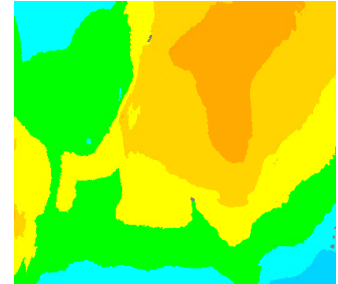
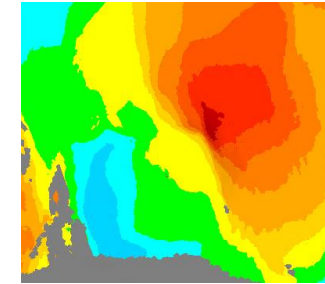
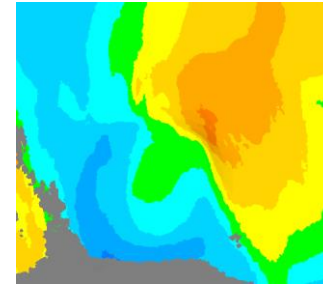
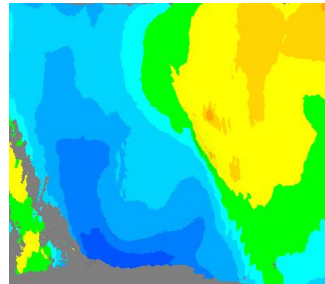
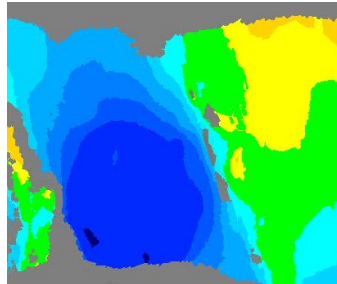
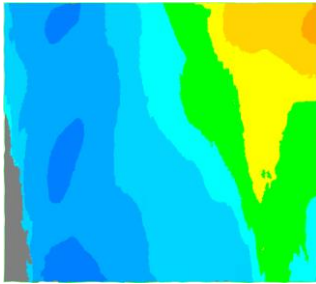
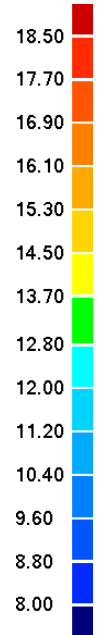
5ml

10ml

Post



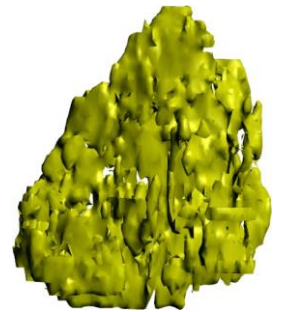
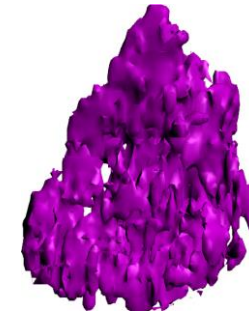
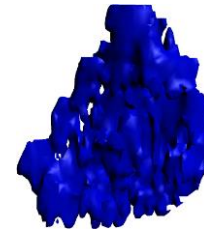
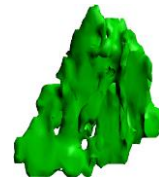
Thickness  
Units:[mm]



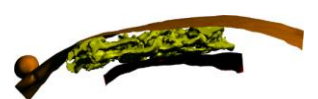
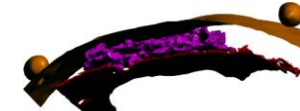
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 010 Abdomen Left

Naive

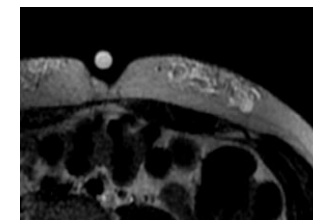
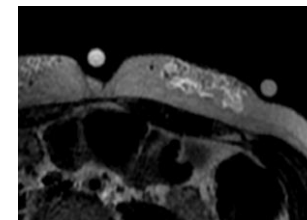
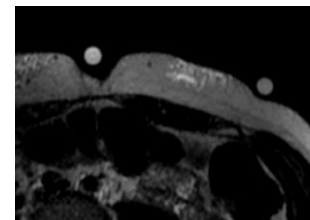
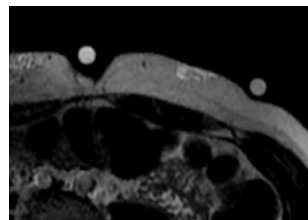
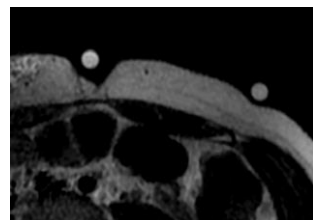
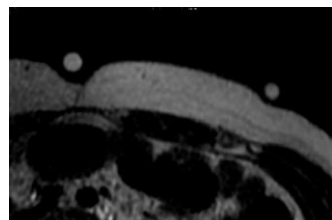
Cannula

2ml

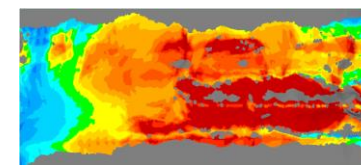
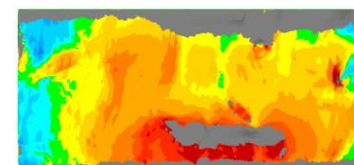
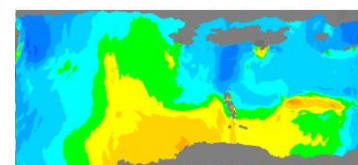
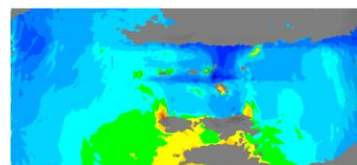
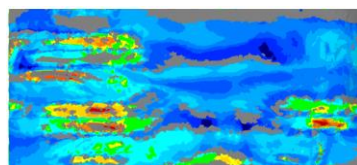
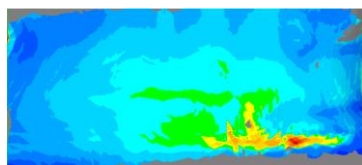
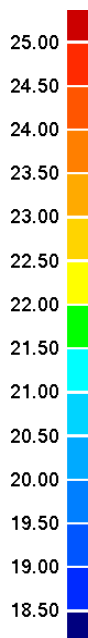
5ml

10ml

Post



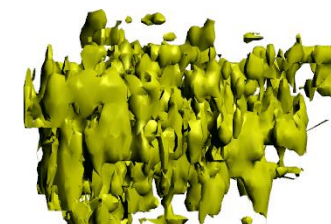
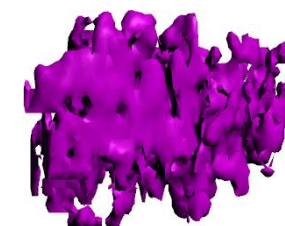
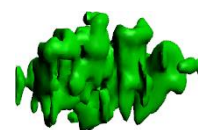
Thickness  
Units:[mm]



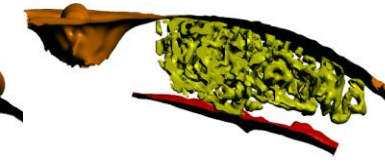
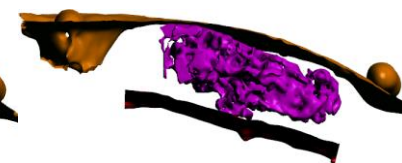
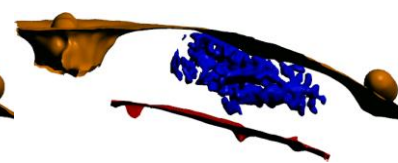
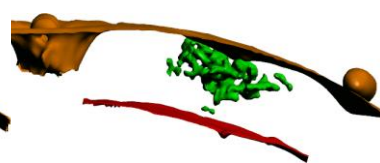
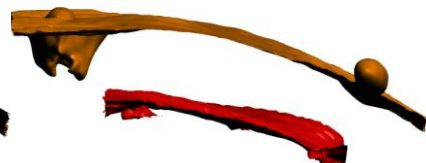
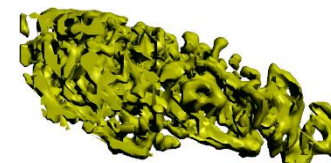
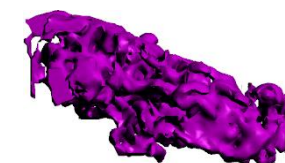
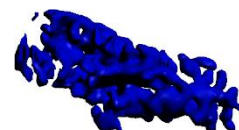
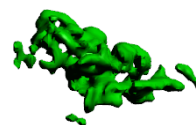
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View





# 010 Abdomen Right

5B

Naive

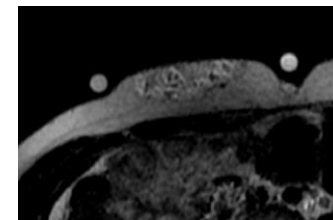
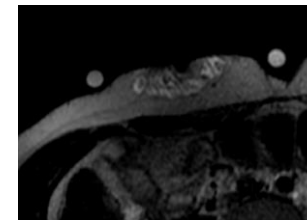
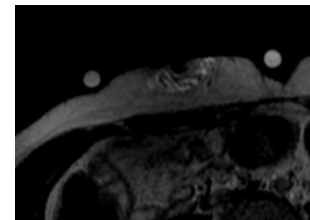
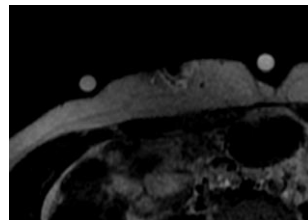
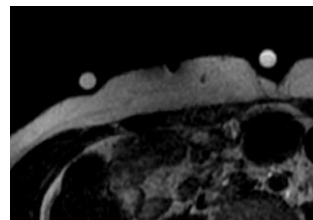
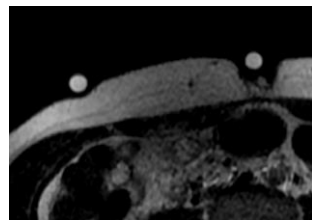
Cannula

2ml

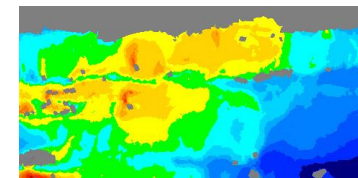
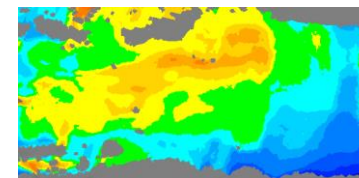
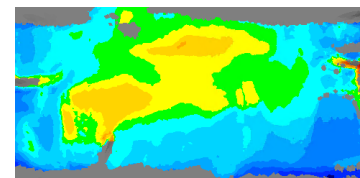
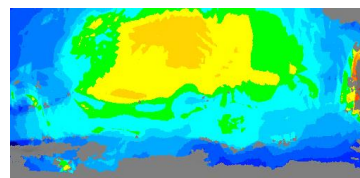
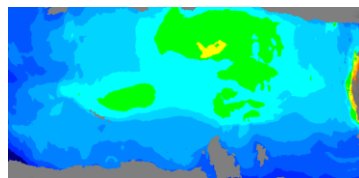
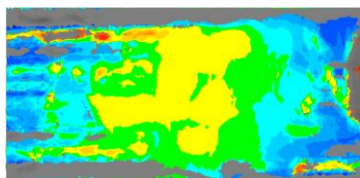
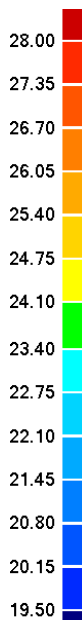
5ml

10ml

Post



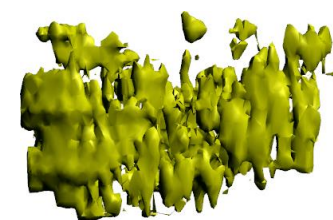
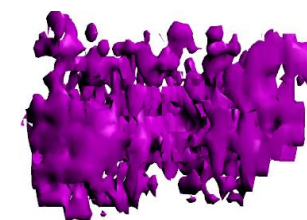
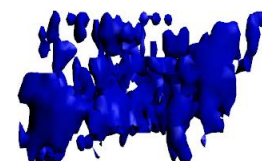
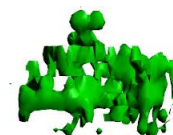
Thickness  
Units:[mm]



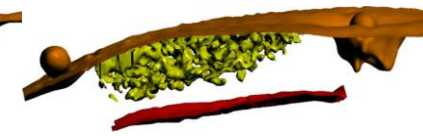
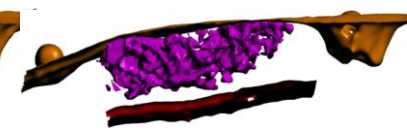
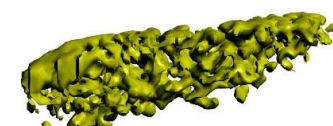
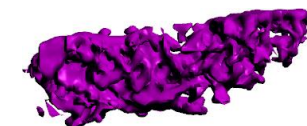
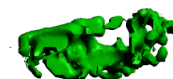
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 010 Arm Left

Naive

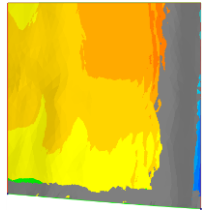
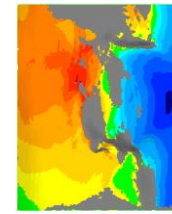
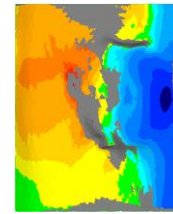
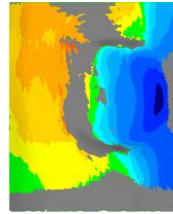
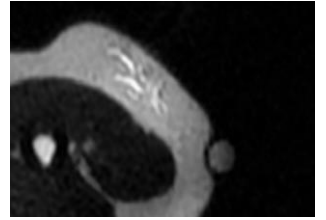
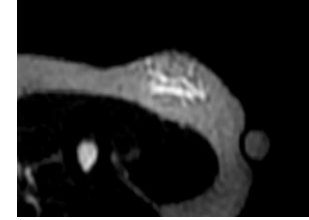
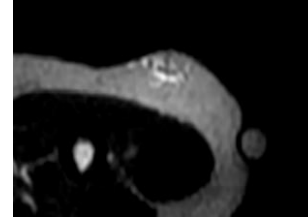
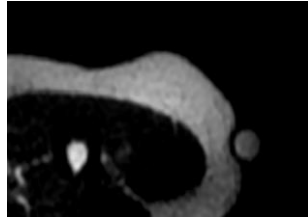
Cannula

2ml

5ml

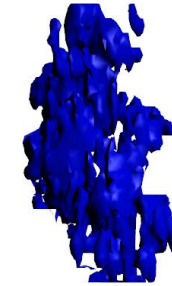
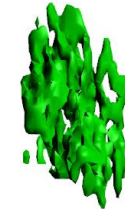
Post

No scan  
acquired

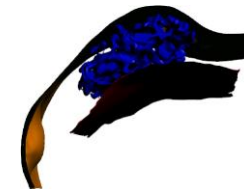


Depot Top  
View

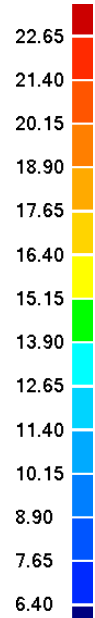
Pre-injection  
no depot



Depot Side  
View



Thickness  
Units:[mm]



Pre-injection  
no depot



# 010 Thigh Left

Naive

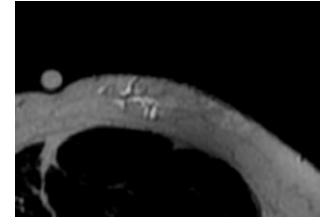
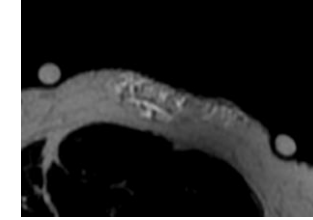
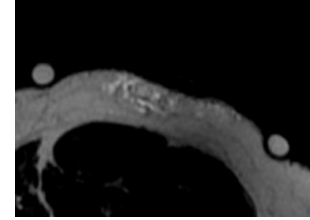
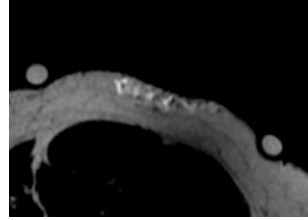
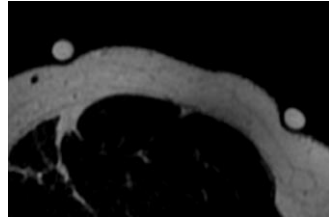
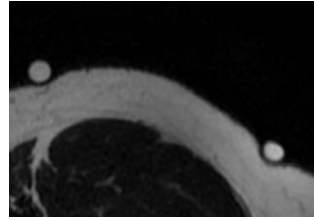
Cannula

2ml

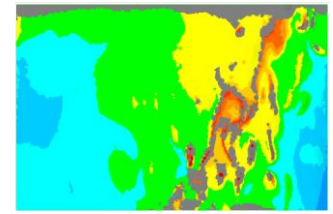
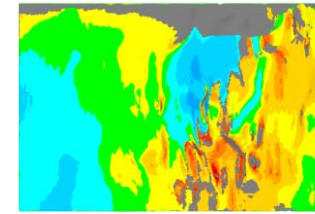
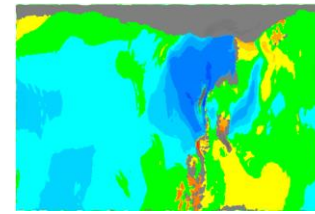
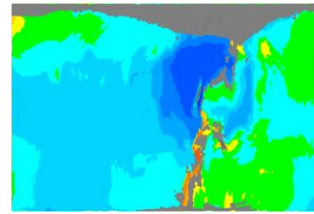
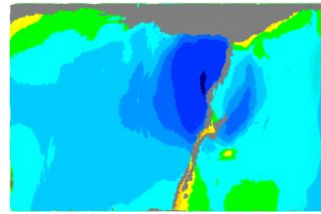
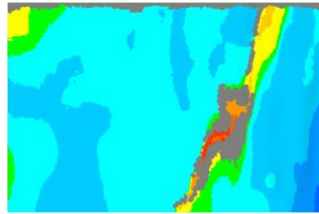
5ml

10ml

Post



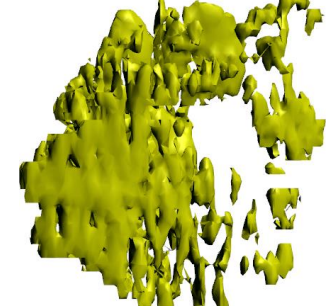
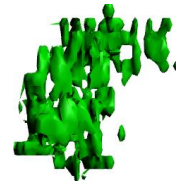
Thickness  
Units:[mm]



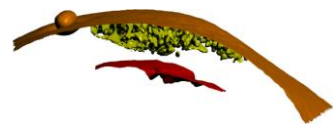
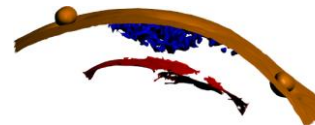
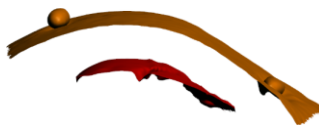
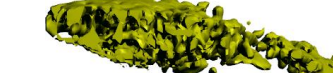
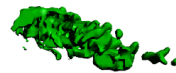
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 010 Thigh Right

Naive

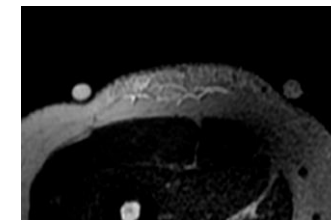
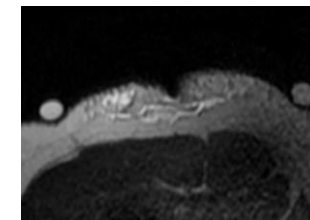
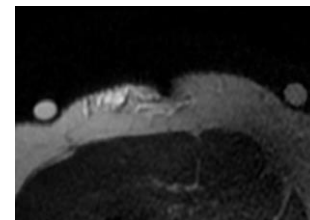
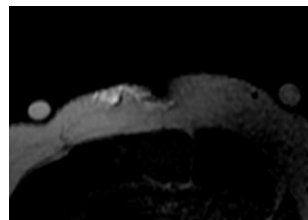
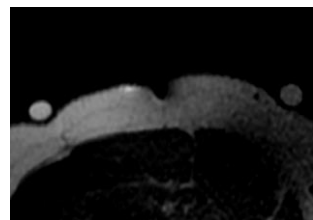
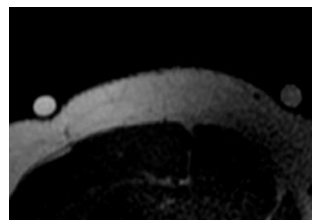
Cannula

2ml

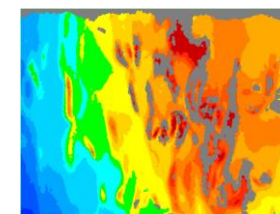
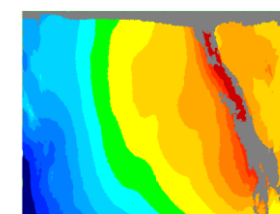
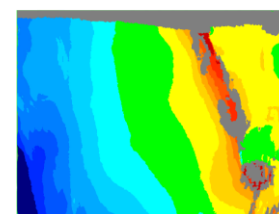
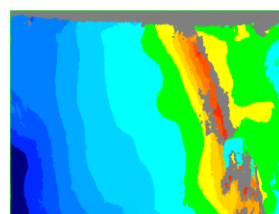
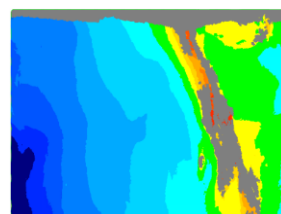
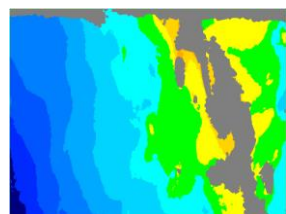
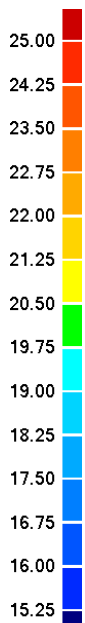
5ml

10ml

Post



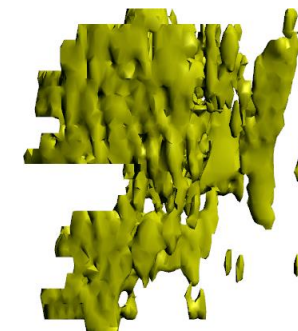
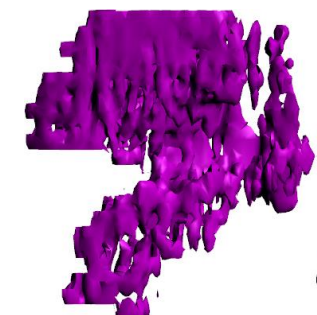
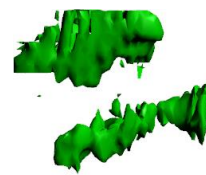
Thickness  
Units:[mm]



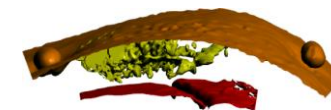
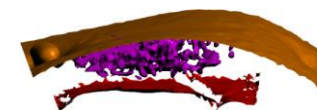
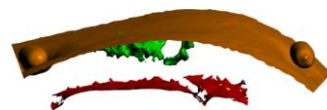
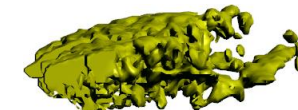
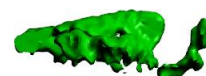
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 011 Abdomen Left

Naive

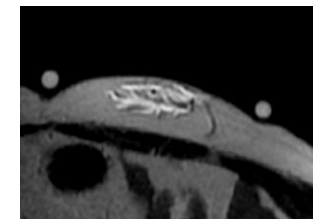
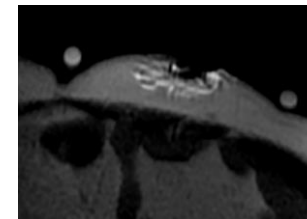
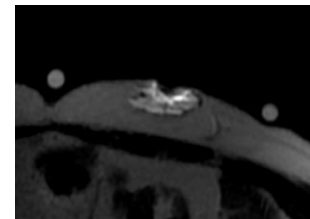
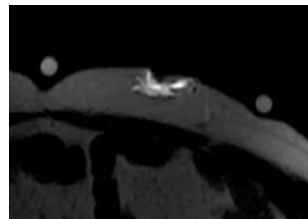
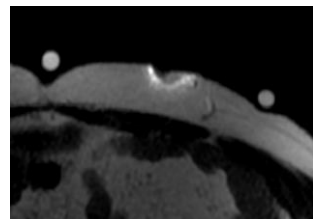
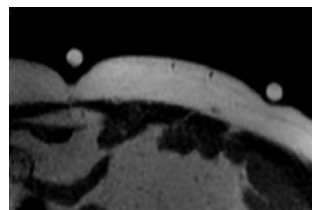
Cannula

2ml

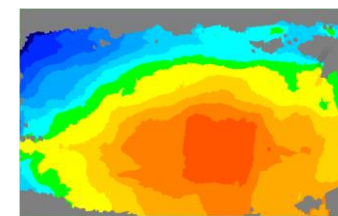
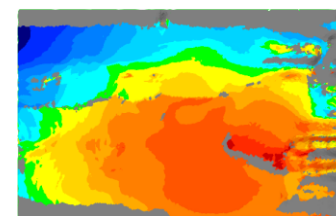
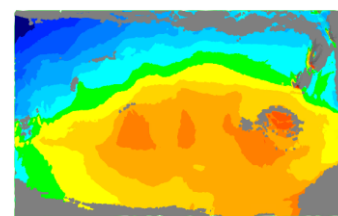
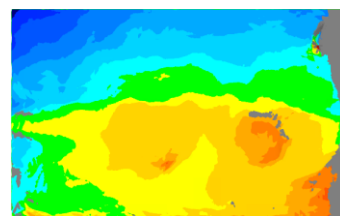
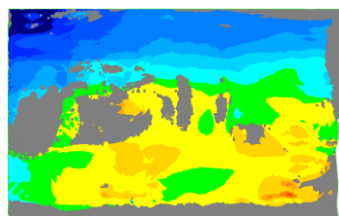
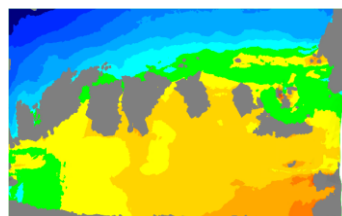
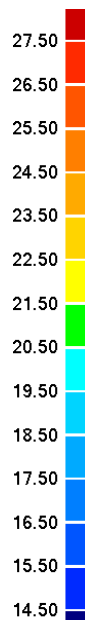
5ml

10ml

Post



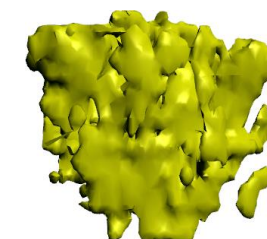
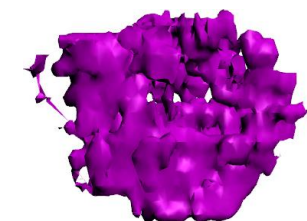
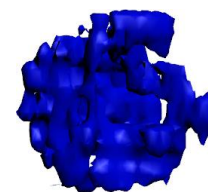
Thickness  
Units:[mm]



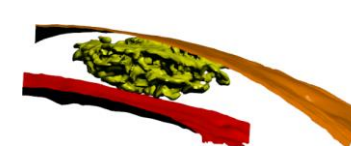
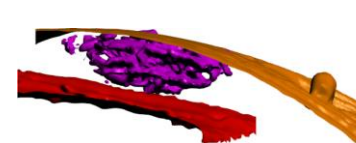
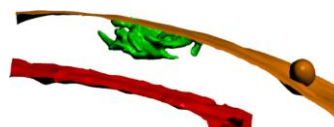
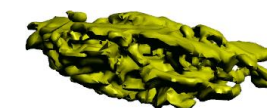
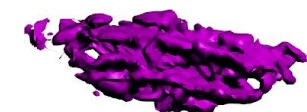
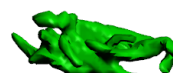
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View





# 011 Abdomen Right

Naive

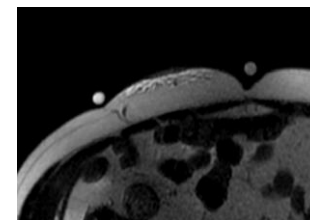
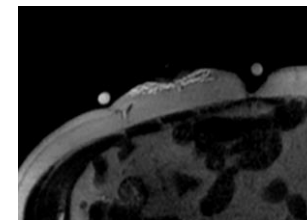
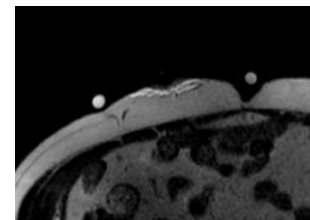
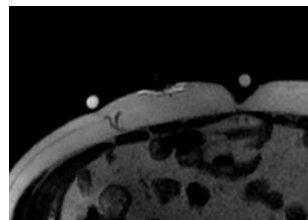
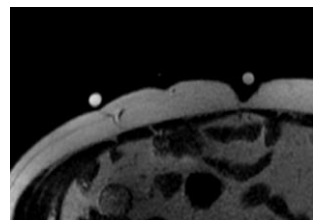
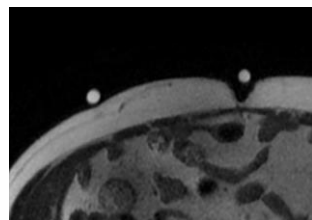
Cannula

2ml

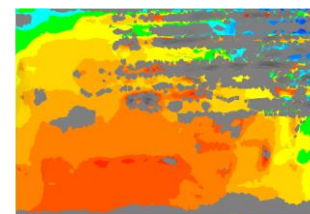
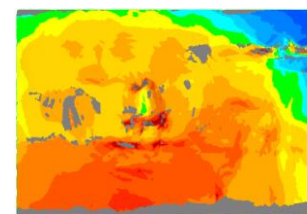
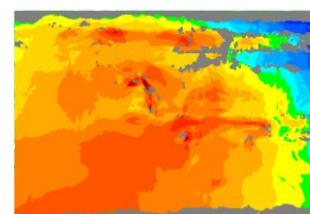
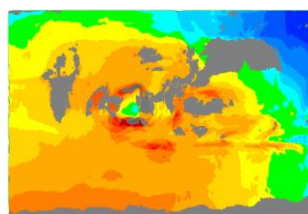
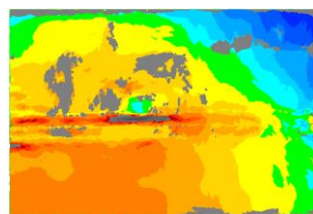
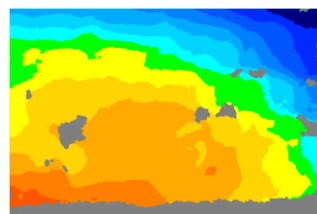
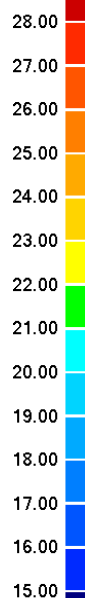
5ml

10ml

Post



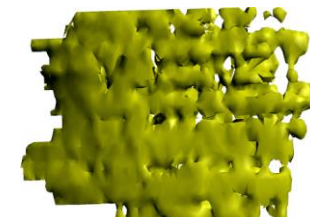
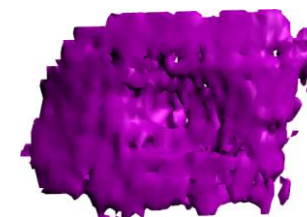
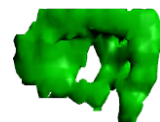
Thickness  
Units:[mm]



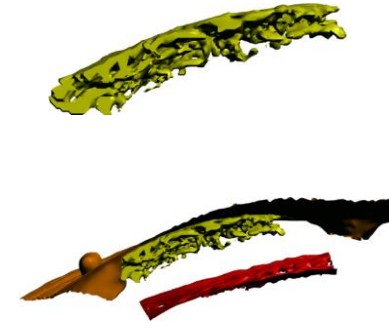
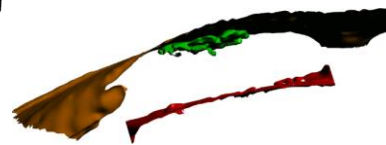
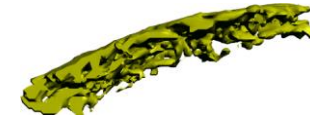
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 011 Arm Right

Naive

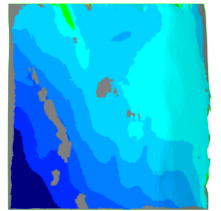
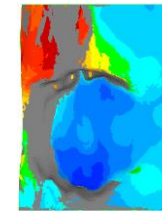
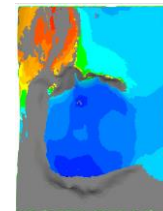
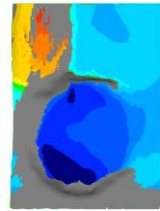
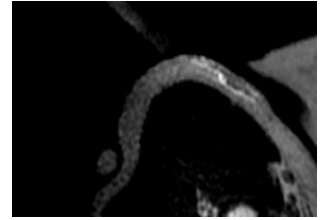
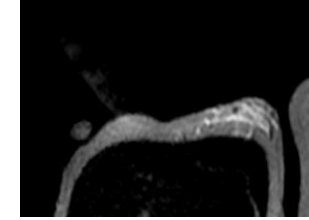
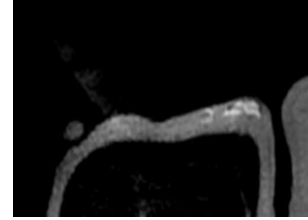
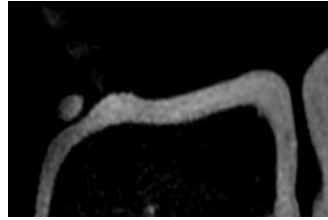
Cannula

2ml

5ml

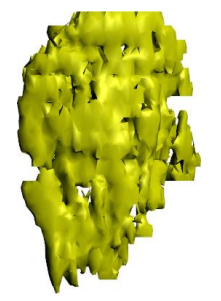
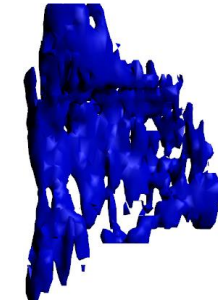
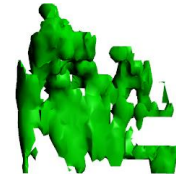
Post

No scan  
acquired

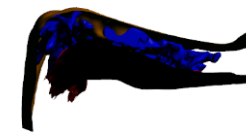
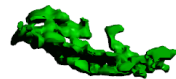


Depot Top  
View

Pre-injection  
no depot

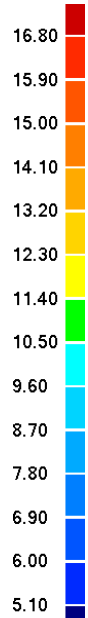


Depot Side  
View



Pre-injection  
no depot

Thickness  
Units:[mm]



# 011 Thigh Left

Naive

Cannula

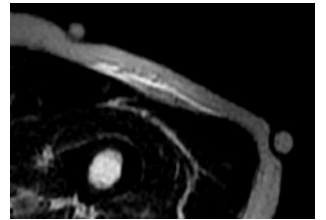
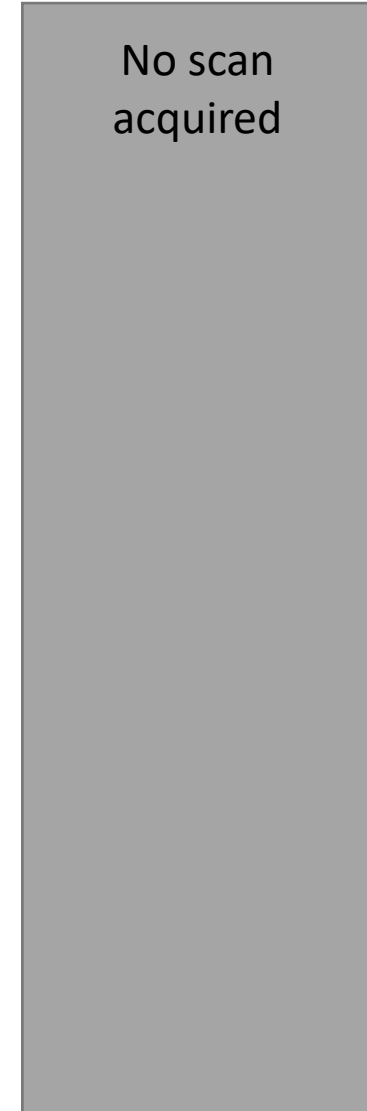
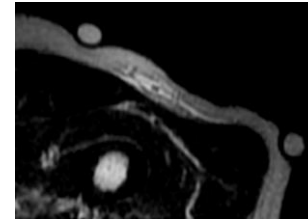
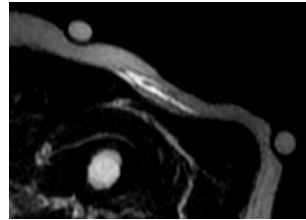
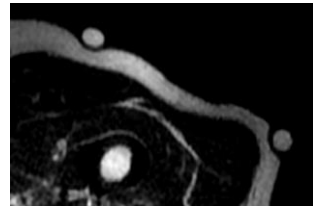
2ml

5ml

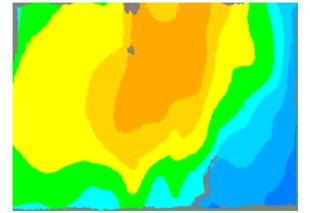
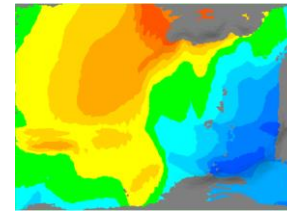
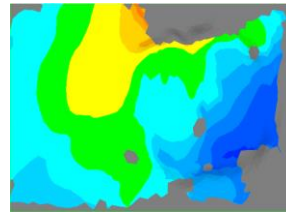
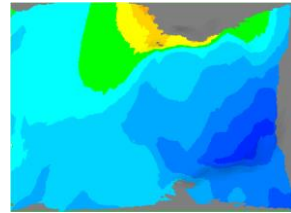
10ml

Post

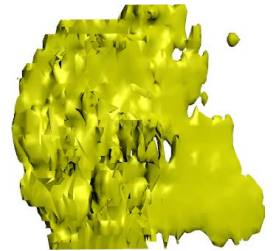
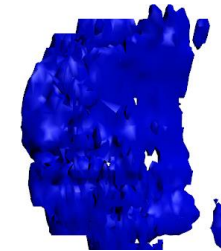
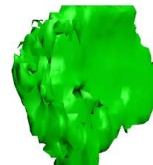
No scan  
acquired



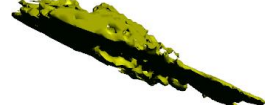
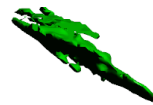
No scan  
acquired



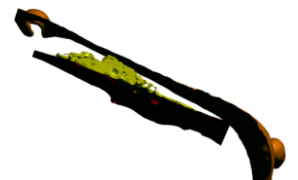
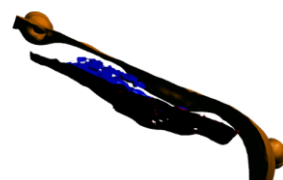
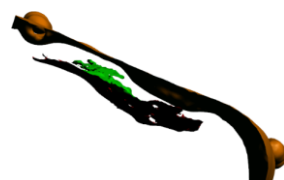
Depot Top  
View



Depot Side  
View

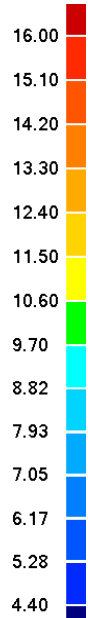


Pre-injection  
no depot



Pre-injection  
no depot

Thickness  
Units:[mm]





# 011 Thigh Right

Naive

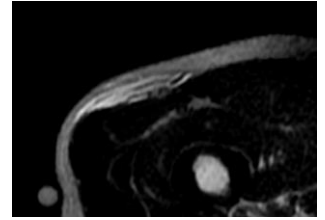
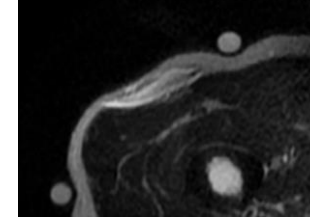
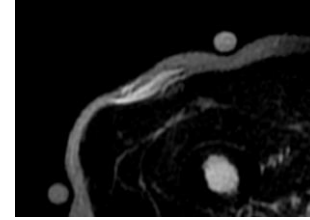
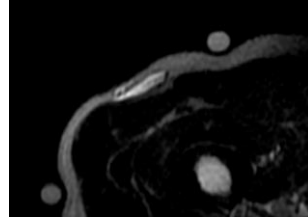
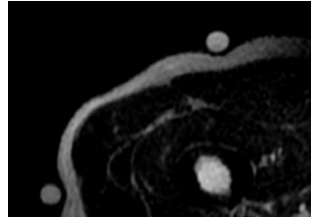
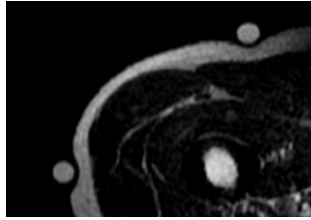
Cannula

2ml

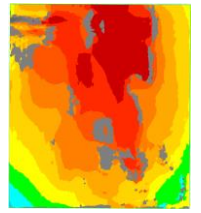
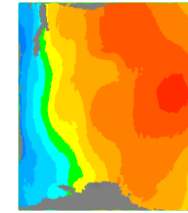
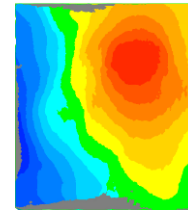
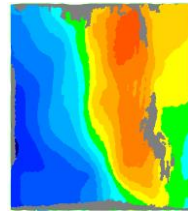
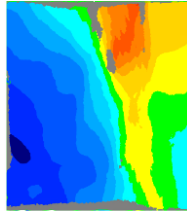
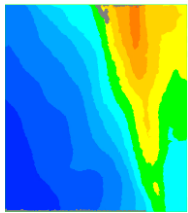
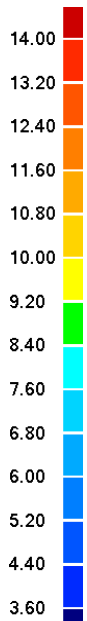
5ml

10ml

Post



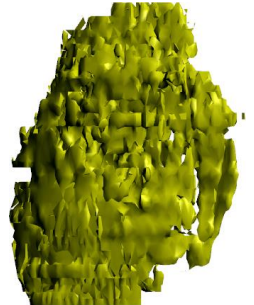
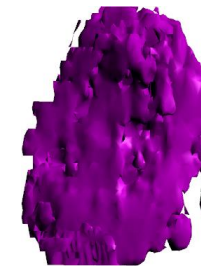
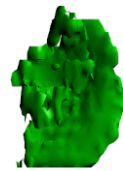
Thickness  
Units:[mm]



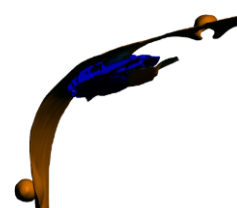
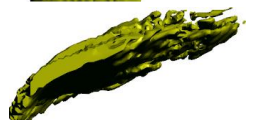
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 012 Abdomen Left

Naive

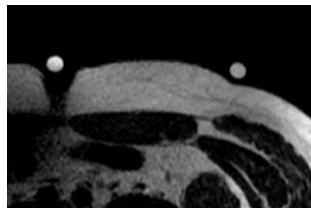
Cannula

2ml

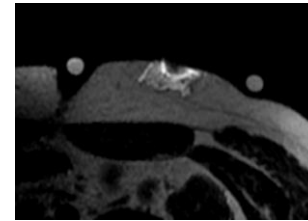
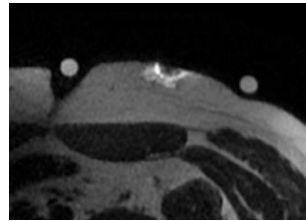
5ml

10ml

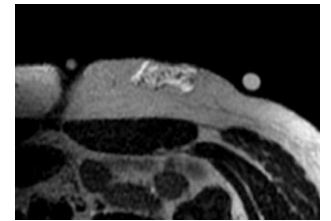
Post



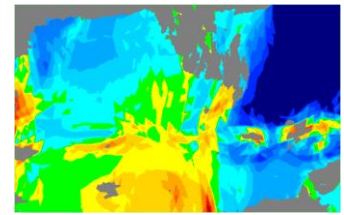
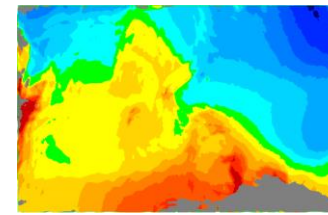
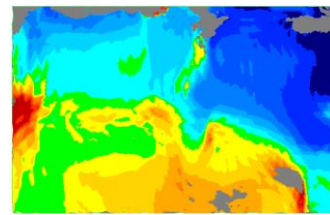
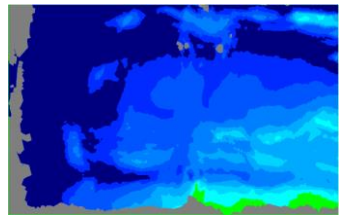
No scan  
acquired



No scan  
acquired



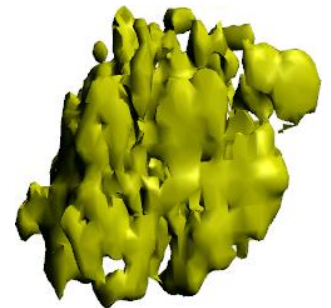
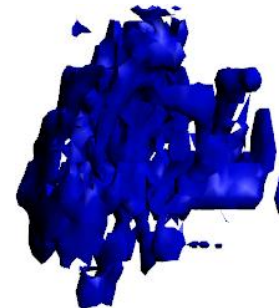
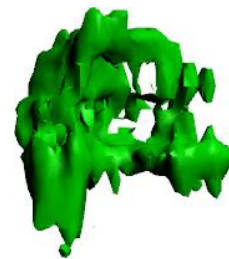
Thickness  
Units:[mm]



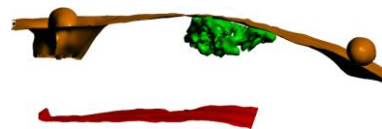
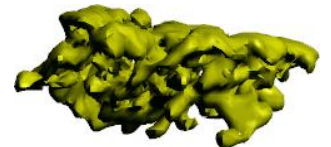
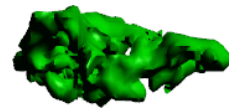
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 012 Abdomen Right

Naive

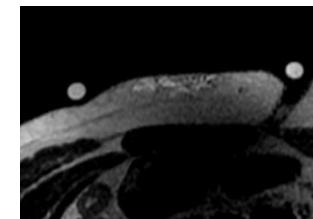
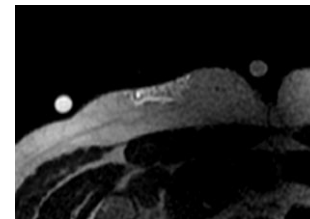
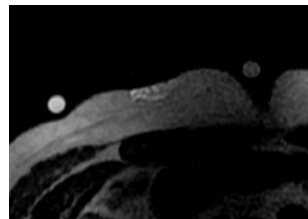
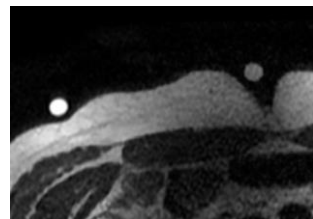
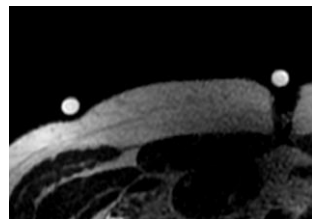
Cannula

2ml

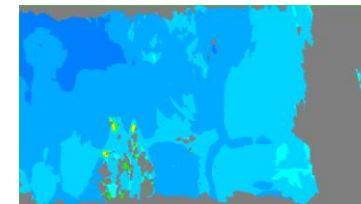
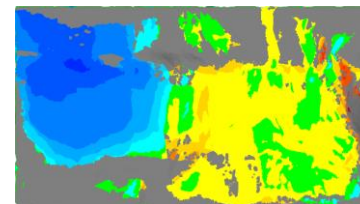
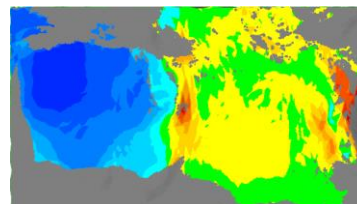
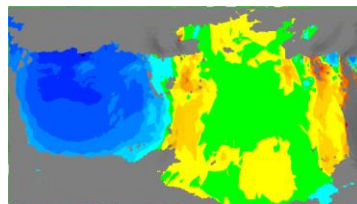
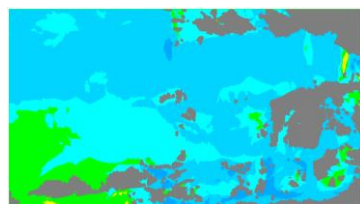
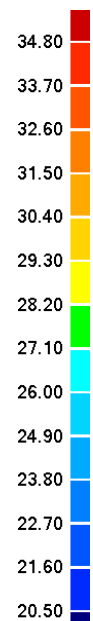
5ml

10ml

Post



Thickness  
Units:[mm]

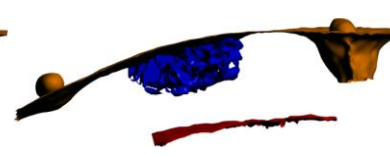
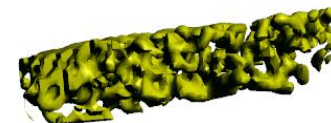
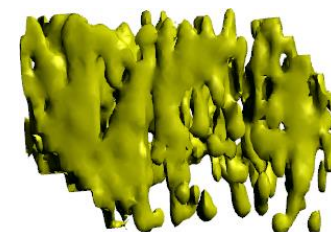
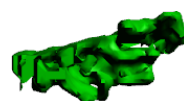
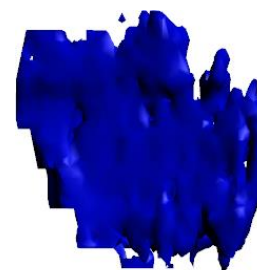
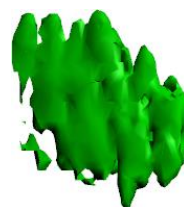


Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View

Depot Side  
View





# 012 Arm Left

5C

Naive

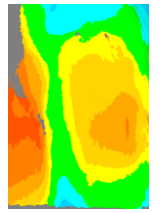
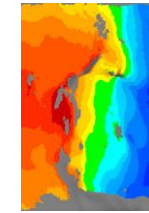
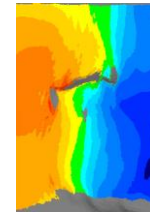
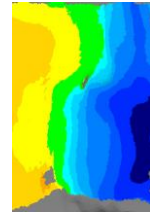
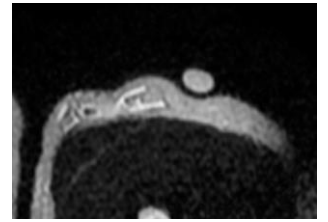
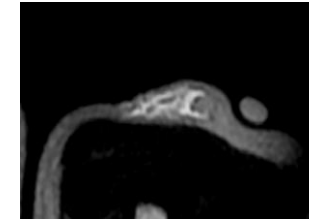
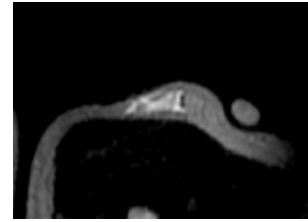
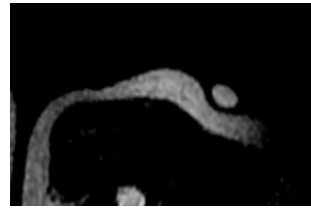
Cannula

2ml

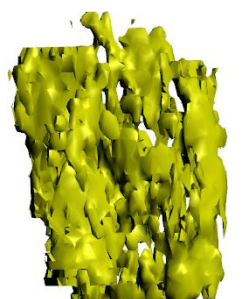
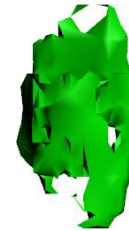
5ml

Post

No scan  
acquired

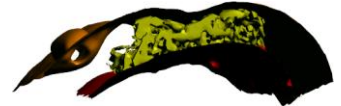
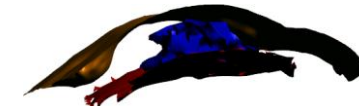
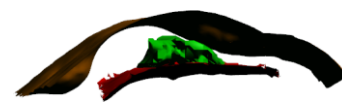
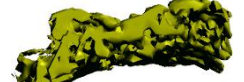
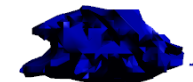


Depot Top  
View



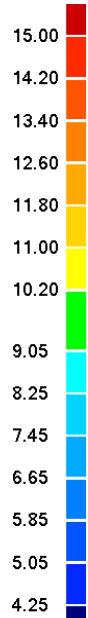
Pre-injection  
no depot

Depot Side  
View



Pre-injection  
no depot

Thickness  
Units:[mm]



# 012 Thigh Left

Naive

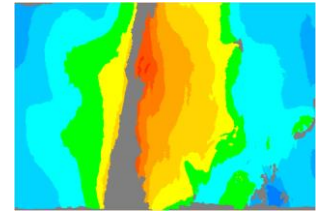
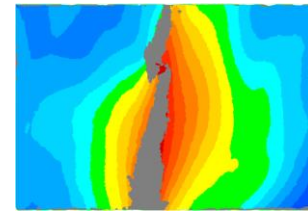
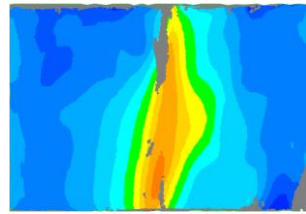
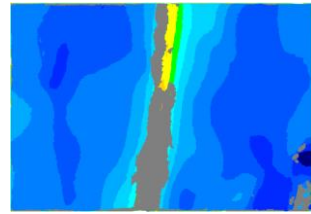
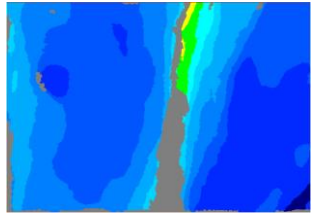
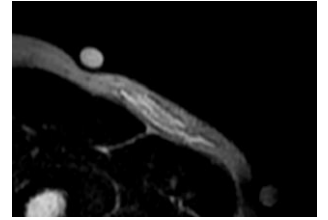
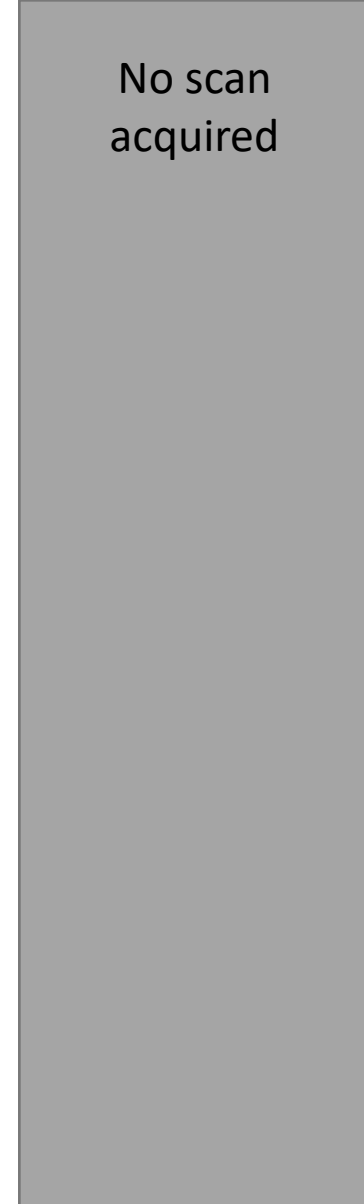
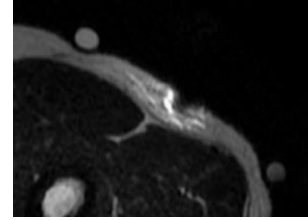
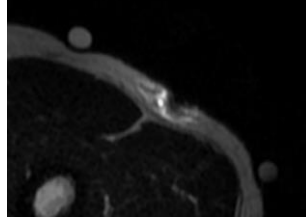
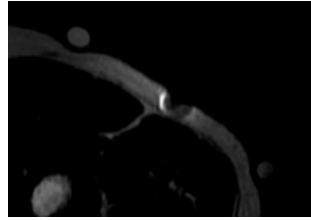
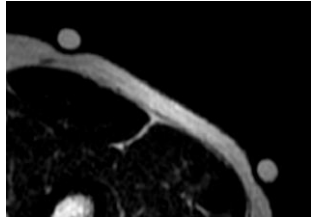
Cannula

2ml

5ml

10ml

Post



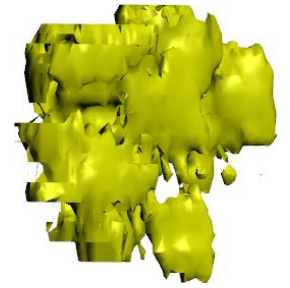
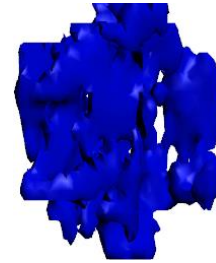
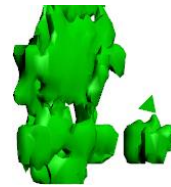
Thickness  
Units:[mm]



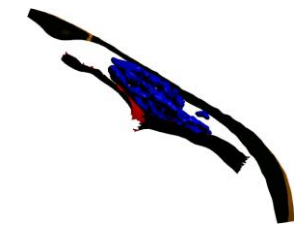
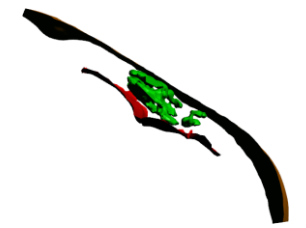
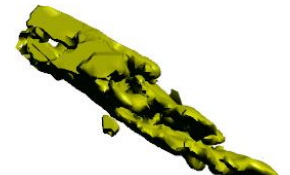
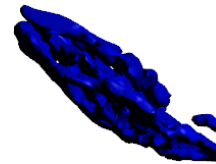
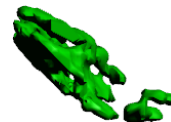
Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View



# 012 Thigh Right

Naive

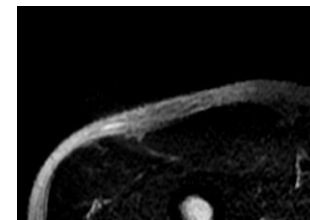
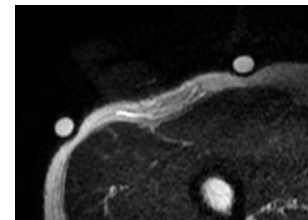
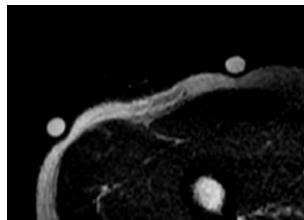
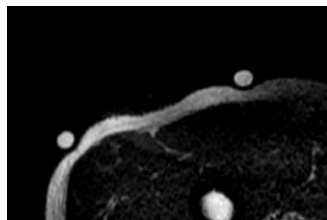
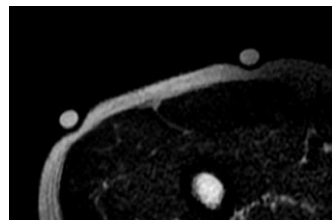
Cannula

2ml

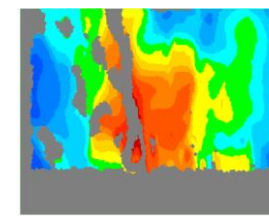
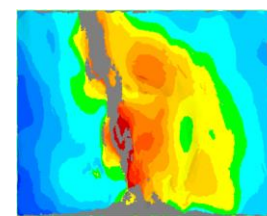
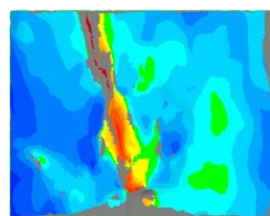
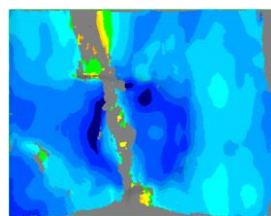
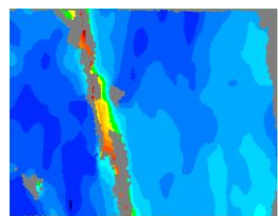
5ml

10ml

Post



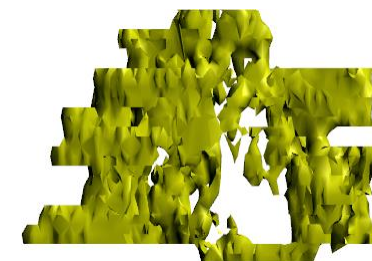
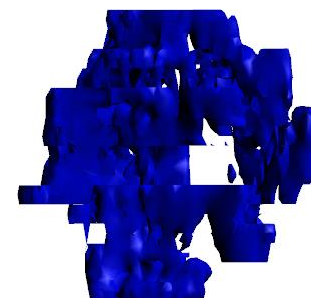
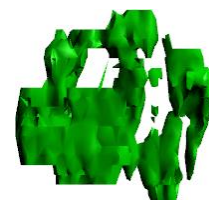
Thickness  
Units:[mm]



Pre-injection  
no depot

Pre-injection  
no depot

Depot Top  
View



Depot Side  
View

