## **Tumor Segmentation Liver Segmentation**

## Liver CT and **Segmented Tumor**



## **Outcome:**

Local Progression

$$rac{\sum_{i=1}^{N_g} \sum_{j=1}^{N_g} (p_i {+} p_j) (i {-} j)^2}{\sum_{i=1}^{N_g} s_i}$$

$$rac{rac{1}{N_p} \sum_{i=1}^{N_p} (\mathbf{X}(i) - ar{X})^4}{\left(rac{1}{N_p} \sum_{i=1}^{N_p} (\mathbf{X}(i) - ar{X})^2
ight)^2}$$

$$\sum_{i=1}^{N_g} \sum_{j=1}^{N_g} ig(i + j - \mu_x - \mu_yig)^3 p(i,j)$$

#### **Time-To-Event:**

8.3 Months

$$rac{rac{1}{N_p} \sum_{i=1}^{N_p} (\mathbf{X}(i) - ar{X})^4}{\left(rac{1}{N_p} \sum_{i=1}^{N_p} (\mathbf{X}(i) - ar{X})^2
ight)^2}$$

### **Neighboring Gray Tone Difference Matrix Strength:** 0.0271

#### **Skewness:**

198.6652

**Gray Level Co-occurrence**  $\sum_{i=1}^{N_g}\sum_{j=1}^{N_g}\left(i+j-\mu_x-\mu_y\right)^3p(i,j)$  Gray Level Co-occurrence Matrix Cluster Shade: -955.8940

# Liver CT and **Segmented Tumor**



Outcome:

# $rac{\sum_{i=1}^{N_g}\sum_{j=1}^{N_g}(p_i{+}p_j)(i{-}j)^2}{\sum_{i=1}^{N_g}s_i}$

$$rac{rac{1}{N_p} \sum_{i=1}^{N_p} (\mathbf{X}(i) - ar{X})^4}{\left(rac{1}{N_p} \sum_{i=1}^{N_p} (\mathbf{X}(i) - ar{X})^2
ight)^2}$$

$$\sum_{i=1}^{N_g}\sum_{j=1}^{N_g}\left(i+j-\mu_x-\mu_y\right)^3p(i,j)$$
 Gray Level Co-occurrence Matrix Cluster Shade:

## **Neighboring Gray Tone Difference Matrix Strength:** 0.0071

#### **Skewness:**

-0.9242

**Gray Level Co-occurrence** 

-452.4516

No Local Progression