# Advanced 3D Imaging of Uterine Leiomyoma's Morphology by Propagation-based Phase-Contrast Microtomography

Alessandra Giuliani<sup>1</sup>, Stefania Greco<sup>2</sup>, Serena Pacilè<sup>3</sup>, Alessandro Zannotti<sup>2</sup>, Giovanni Delli Carpini<sup>1</sup>, Giuliana Tromba<sup>3</sup>, Stefano Raffaele Giannubilo<sup>1</sup>, Andrea Ciavattini<sup>1</sup>, Pasquapina Ciarmela<sup>2</sup>

#### Abstract

Supplementary material for the article submitted to Nature Scientific Reports. This material presents an example of slice thresholding by the Mixture Modeling Algorithm and movies related to microCT stack-sequences of 2D axial slices for healthy myometrium and leiomyoma tissues.

### **Supplementary material**

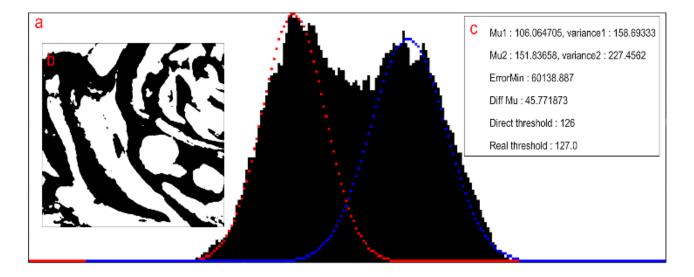


Figure 4.

Example (from P1-L biopsies) of slice thresholding by the Mixture Modeling Algorithm. The applied ImageJ plugin returns: (a) a histogram with two Gaussians (from left to right, the smooth muscle and the collagen phases), (b) the thresholded image and (c) the parameters obtained (average, standard deviation, and threshold).

<sup>&</sup>lt;sup>1</sup>Department of Clinical Science, Università Politecnica delle Marche, Ancona, Italy.

<sup>&</sup>lt;sup>2</sup>Department of Experimental and Clinical Medicine, Università Politecnica delle Marche, Ancona, Italy.

<sup>&</sup>lt;sup>3</sup>Elettra Sincrotrone Trieste S.C.p.A, Trieste, Italy.

## Movie 1

Mv.1. Healthy myometrium. MicroCT stack-sequence of 2D axial slices (final volume of  $600 \times 600 \times 400 \ \mu m^3$ ) for a representative sample of P1 (P1-Ctr).

## Movie 2

Mv.2. Leiomyoma. MicroCT stack-sequence of 2D axial slices (final volume of  $600 \times 600 \times 400$   $\mu m^3$ ) for a representative sample of P1 (P1-L).