Lung Lesion Analyzer

A Chest Imaging Platform Slicer Extension module
Overview

• Goal: localize, segment and analyze lung lesions and their surroundings

• Localize:
  • The module includes Maximum Intensity Projection tools in order to help to localize the lesions faster.

• Segment:
  • Starting from a landmark in the lesion, the module performs an automatic segmentation

• Analyze:
  • Choose between dozens of metrics not only in the lesion, but also in custom radius spheres surrounding it
1- Select an input CT image
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2- Locate nodule.

2.1- If desired enable Enhance visualization to see the Maximum Intensity Projection. 
Tip: check MIP viewer module for more details

2.2- When MIP is enabled, select the desired projection
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3.1- Click on “New nodule” and click on a point that is clearly inside the lesion to add a new detected nodule.

*Tip: localize the nodule on the MIP view but add it in the regular window. (view picture)*

3.2- If known, select the lesion type. (Nodule/Tumor).

3.3- If needed, click remove nodule and place a new one.
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4- Segment Nodule

4.1- Click segment nodule to start the segmentation

4.2- If desired, after the segmentation process is complete, move the bar to fine tune the segmentation
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Expected results.
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5- Run analysis

5.1- Select all the desired parameters for the selected nodule.

5.2- Select all the desired radius of the sphere around the nodule to analyze.

5.3- Click on “Analyze” to run the analysis.

Tip: the result will show the parameters of the selected nodule.
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5.4 - Click on Show to highlight a sphere

5.5 - To obtain the parameters for all the placed nodules, enable analyze all nodules and start analysis.

Expected results.
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6- Export data.

6.1- Click “Open” to view a table with the results
Tip: Export data if desired.

6.2- Export data file.
Tip: Save the file with .csv extension.
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