00293 VIRTUAL BRONCHOSCOPY USING OsiriX

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Area and Category(at submission):

[WCBIP] Navigation systems

Presentation Preference: Poster

Case Report: NO

Background:
Although the utility of virtual bronchoscopy has been reported, the software for virtual bronchoscopy has not been popular due to the high cost. OsiriX(R) is a reasonably priced software that is available to reconstruct virtual endoscopic images. Herein, we present the ability of OsiriX to enable virtual bronchoscopy.
Methods:
Computed tomography (CT) of the chest was performed without contrast using a 16-row multidetector. Data in 2 mm slices from one lung were obtained in 10 patients with a lung nodule. Virtual bronchoscopic images were established by OsiriX version 5.5 (32-bit). To examine the ability to visualize small bronchi, we tried to visualize the distal bronchus possible. We selected B1a and B10c for the right lung and B1+2a and B10c for the left lung.
Results:
Bronchoscopic images were successfully reconstructed for all patients. It takes less than 30 seconds to convert CT images into bronchoscopic images. The third to the seventh bronchi were visualized, except in one patient whose right B10 was occluded by a tumor. The smallest bronchial diameter visualized was 1.0 to 2.1 mm. For all cases, the second-order bronchus, such as B1 and B10, were easily visualized. To visualize the third and higher-order bronchi, it was sometimes necessary to manually adjust brightness and contrast. The pathway can be recorded and retrieved using the “Fly Through” function. The pathway of the virtual bronchoscopy was reconstructed in only 5 to 10 minutes.
Conclusion:
We demonstrated that OsiriX has enough functionality to reconstruct virtual bronchoscopic images. OsiriX 32-bit is a free software for Mac. Even the 64-bit version cleared by the Food and Drug Administration costs only 599 US dollars. With OsiriX, virtual bronchoscopy can become popular at a relatively low cost.

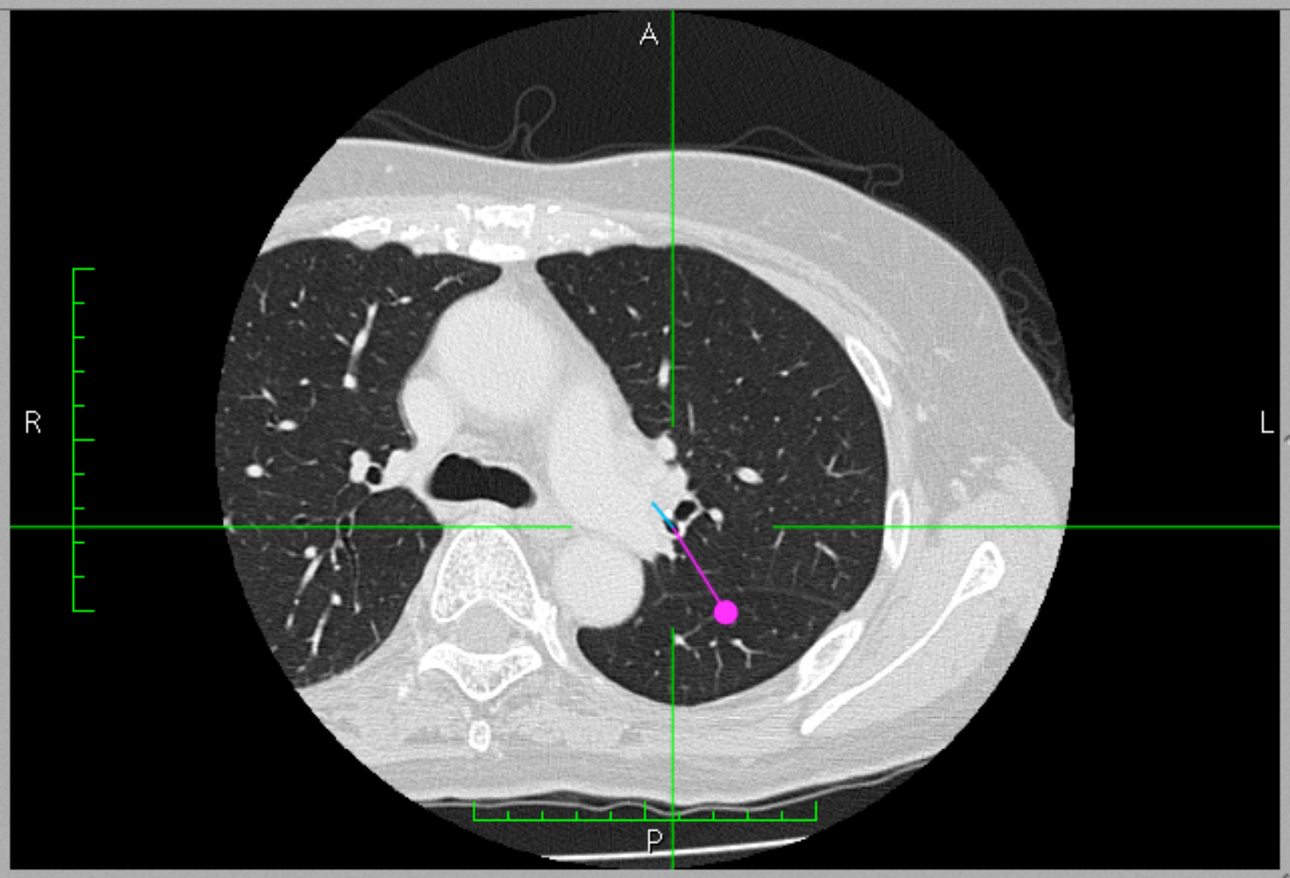
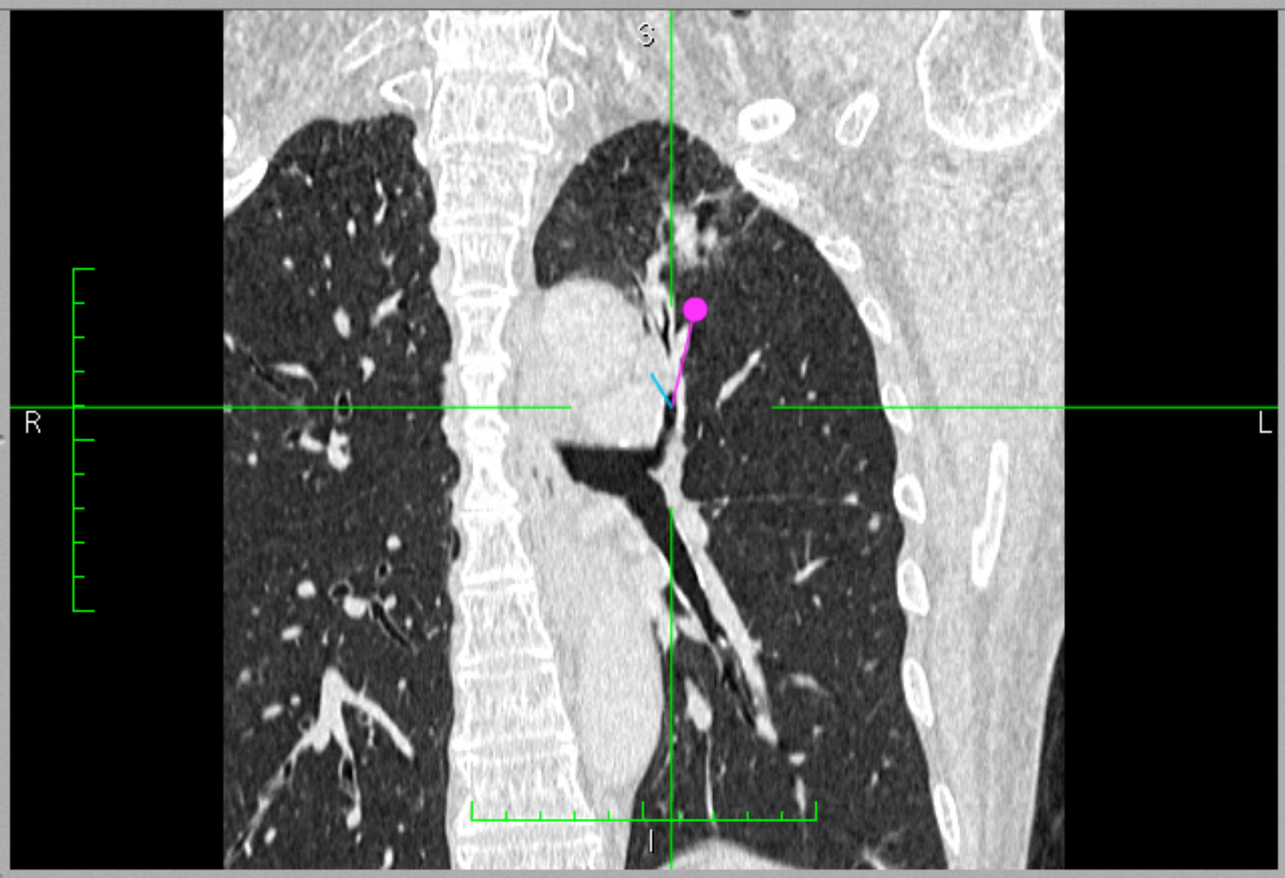
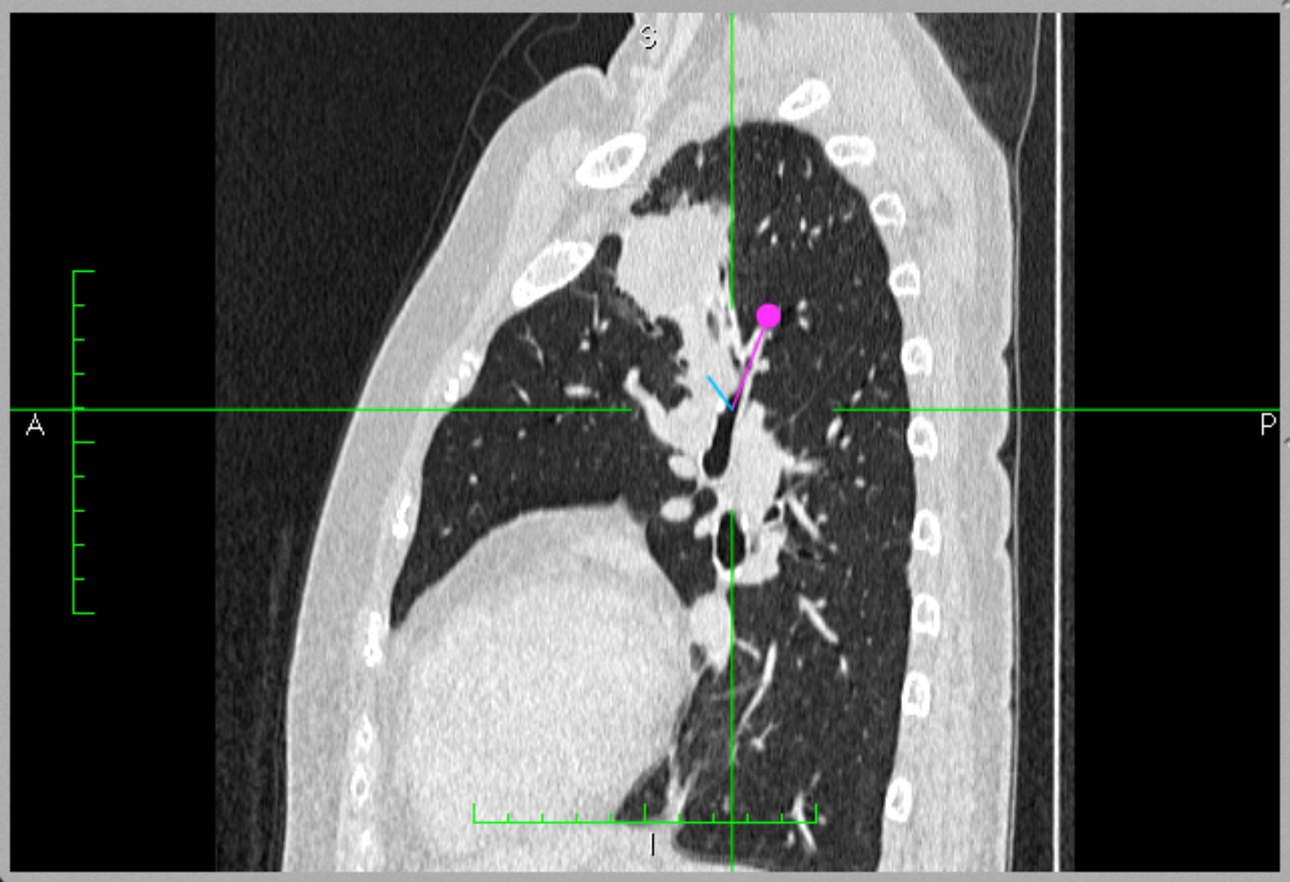
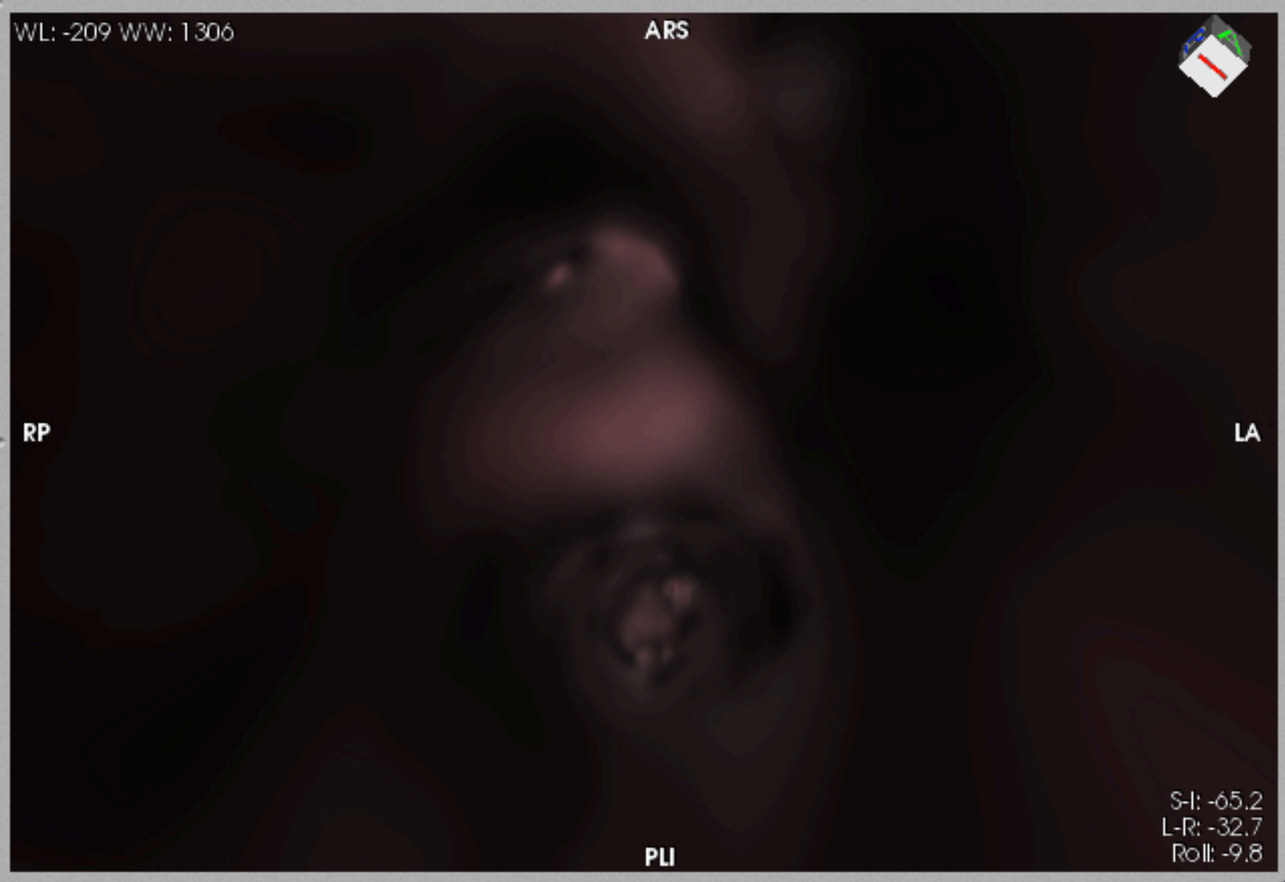
[sr121H00293jpg.jpg]

Endoscopy: CE Vol 1.0 Vol. (4)

MPR Mouse button function

Fly Thru

Shading
Edit
Ambient: 0.1
Diffuse: 0.6
Specular :
Shading

3D Mouse button function

Path Assistant