

# Predictive Fusion® - Explained



**Predictive Fusion** was created to solve the problem of fusing an MRI performed in the supine position with a biopsy performed in left lateral decubitus (LLD) or dorsal lithotomy (DL) position

## The competitor's fusion workflow is:

### Prior to Biopsy

- Radiologist contours prostate MRI from base to apex to create a supine 3D MRI prostate volume.

### During the Biopsy

- Another 3D dataset is created by contouring on ultrasound the "LLD" or "DL" patient image, base to apex.
- The 3D Supine MRI is then fused to the LLD or DL ultrasound 3D dataset.
- The physician is now forced to perform difficult, laborious corrections of fusion errors while patient is on table.

## The Predictive Fusion workflow engages MIM ReSlicer® technology before the fusion.

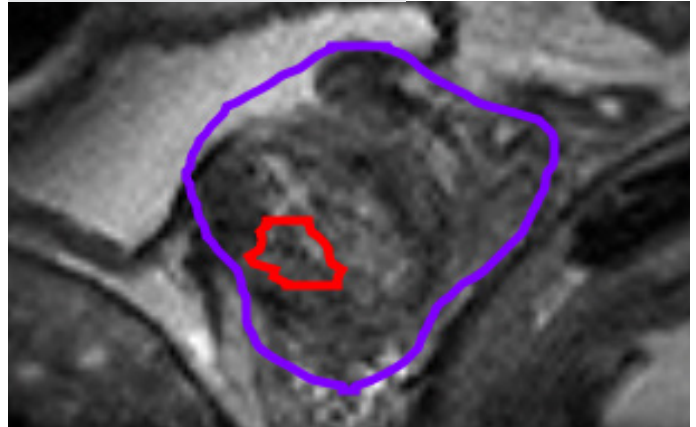
### Prior to Biopsy

- Radiologist contours prostate MRI from base to apex to create a supine 3D MRI prostate volume.
- Using the virtual probe, MIM "reslices" the supine 3D MRI prostate volume into biopsy position. The resliced 3D MRI is the "Predicted" MRI. This technology is called Predictive Fusion.

### During the Biopsy

- As a result of the Predictive Fusion, an initial placement of the probe in the rectum produces near-symmetry of MRI and live ultrasound.
- This permits a fusion requiring minimal adjustments, delivering reduced procedure length and increased accuracy.

Original MR - Supine Position



Sector of Lesion: Right Mid

Resliced MR - Biopsy Position



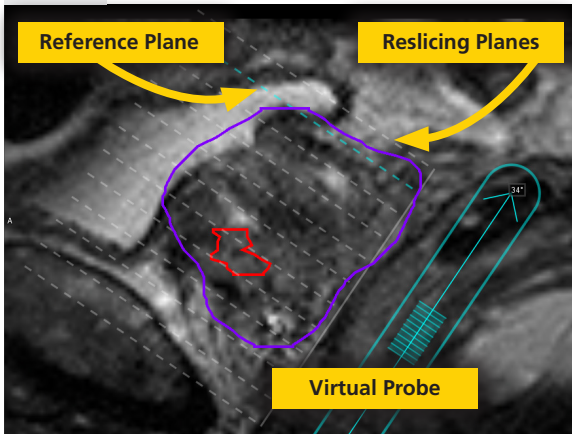
Sector of Lesion: Right Apex

Above is an example of the sector changes which occur by reslicing the prostate to the orientation of the biopsy position.

# MIM ReSlicer®

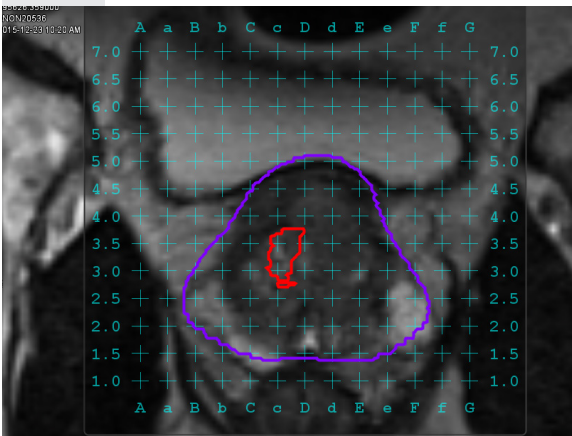
MIM presents instructions for a proper virtual probe placement.

## Step 1



1. Place the virtual probe parallel to the mid-posterior wall and the reference plane at the base. The virtual probe is placed in this position to closely match the positioning of the ultrasound probe and ultrasound imaging planes during standard biopsies.

## Step 2



2. In transverse, place grid so the posterior wall of the contour is approximately at line 1.0.

## Step 3



3. According to the virtual probe placement, the MRI is resliced into the biopsy position. This is "predicting" the fusion of the live ultrasound with the MRI contours.