QUICK REFERENCE

ELIMINATING EXTRA-CARDIAC ACTIVITY

Corridor4DM Version: 5.2

Target Audience: Technologists

Primary Workstation: Processing

Clinical Importance

In rare occurrences, **extra-cardiac** activity in the field of view (i.e. liver or loop of bowel) will affect 4DM contour generation around the LV. The images on the **Surf-QA** screen will show misplaced surface estimation (See Figure 1 for an example). Use the **Constraints** option at the top of the **Setup** screen to correct this.

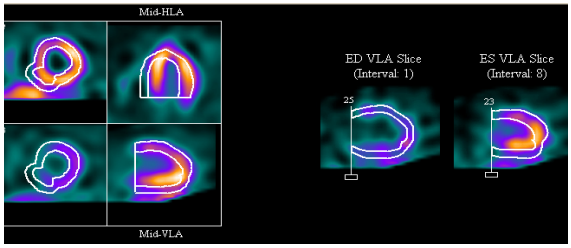

***Figure 1**: Shows an example of MISPLACED 4DM contour generations overlaying the LV on the Surf-QA screen.*

To apply Constraints follow these steps:

- Check the **Constraint** toggle checkbox in the gray screen controls bar at the top of the **Setup** screen. Constraint limits and handles will appear overlying the VLA, SA and HLA views (see Figure 2).

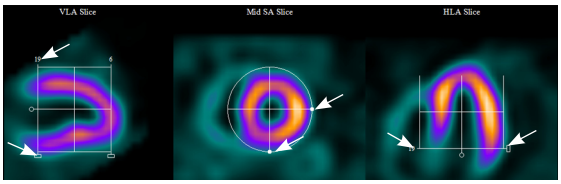

***Figure 2**: Shows proper constraint placement. The white arrows in the image above are pointing to the VLA, SA, and HLA constraint handles*

- In **all of the SA images**, click and drag the constraint handles to reposition the constraints. Be careful not to clip any myocardium out of the limits, but do not leave too much space around the LV, either. See Figures 3 and 4 for examples of **improperly** positioned constraints.

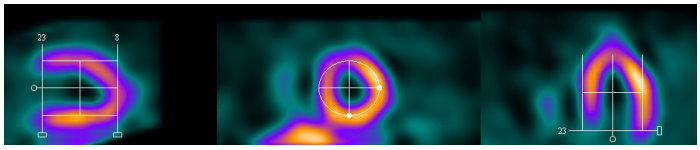

***Figure 3 Above**: Shows constraints **IMPROPERLY** placed (i.e., too tight). They are clipping out the visible bowel loop as desired, but are ALSO clipping portions of the myocardium.*

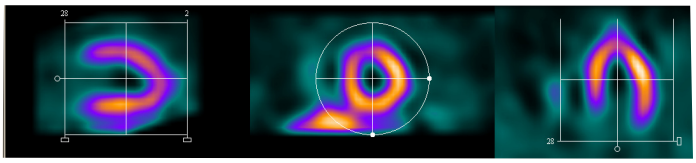

***Figure 4 Above:** Shows constraints **IMPROPERLY** placed (i.e., too loose). Although they are not clipping out any myocardium, a portion of the loop of bowel (seen at the bottom left of the SA slice) is also included.*

- **Visually confirm** that the extra-cardiac activity is excluded in all of the HLA and VLA views and adjust if necessary.
- Click **Process** (at top of **Setup** screen) to apply 4DM algorithms using your specified orientation, limits, and constraints. The 4DM program will automatically proceed to the **Surf-QA** screen to check the new LV surface estimates with constraints applied. (See Figure 5).

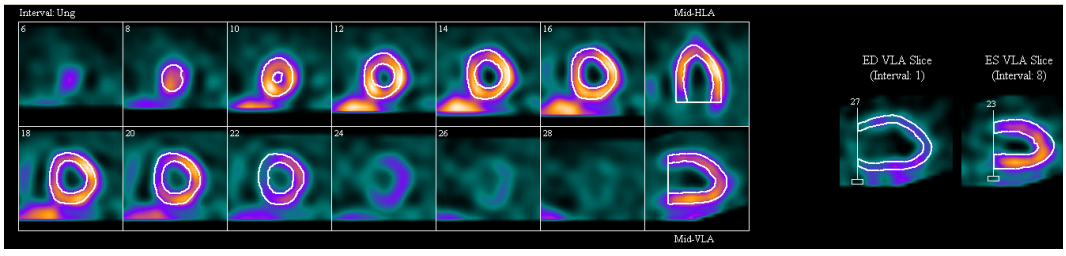

***Figure 5**: Shows ACCURATE 4DM contour generations overlying the LV on the Surf-QA screen after applying constraints.*

Constraints are NOT the same as masking!

By using constraints you do not eliminate viewing the extra-cardiac space around the heart.

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