# Dual Source CT
# Visualization of thrombosed Aortocoronary Venous Bypass graft

## SOMATOM Definition

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### HISTORY

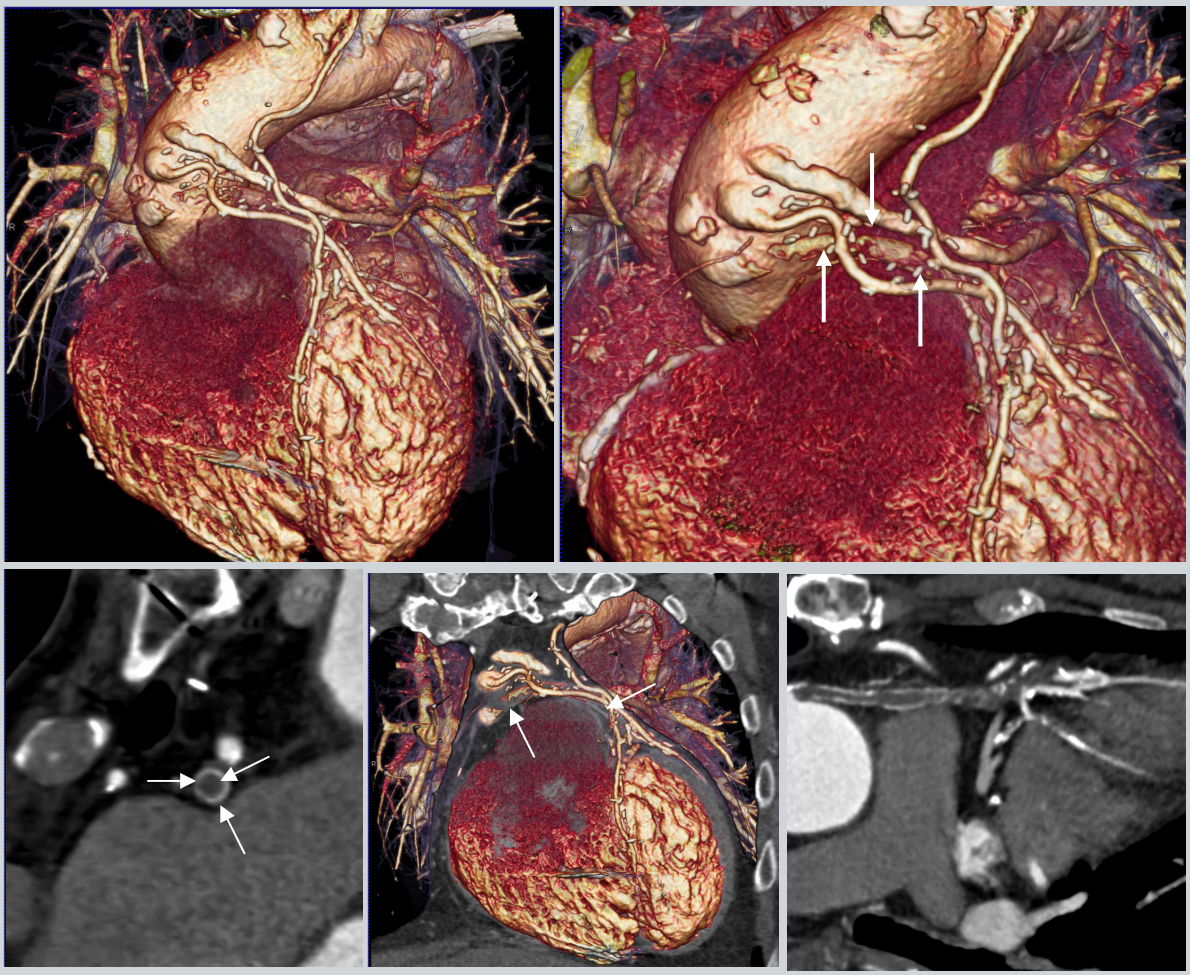
A 64 year-old male patient with chest pain with known coronary artery disease (CAD) and after bypass surgery was referred for a Dual Source CT. A scan from the aortic arch to the apex was performed with 140ml of Ultravist 370 followed by a slain chaser bolus of 100ml.

### DIAGNOSIS

Visualization of 5 bypass grafts. Three of them are patent (left internal mammarian artery-bypass leading to left anterior descending artery, Radial artery to the first diagonal branch, one aortocoronary venous bypass leading to the Circumflex artery). The fourth aortocoronary venous bypass is leading to the left anterior descending recently occluded by a large thrombus. From a CT morphological aspect (density in side the thrombus 67 HU) the occlusion is not older than 3 month.
The last venous bypass graft is leading to the right coronary artery and already occluded since a longer time (already organized and not anymore visible).

### COMMENTS

With the high tempo resolution of 82ms the bypasses and the anastomosis are sharp displayed. With the visualization of VRT display in one view the status of the bypass grafts is detected. The CT images give also morphological information of the vessel lumen and gives hints about the time point of occlusion which has impact on therapy.



Visualization of 5 bypass grafts. Three with normal flow and one with a large thrombus in the aortocoronary venous bypass going to the LAD and the fifth is chronically occluded.

## EXAMINATION PROTOCOL

| *Scanner* | *SOMATOM Definition* |
|---|---|
| ***Scan area*** | *Heart* |
| ***Scan length*** | *190 mm* |
| ***Scan time*** | *17 s* |
| ***Scan direction*** | *Caudo-cranial* |
| ***kV*** | *120 kV* |
| ***Effective mAs*** | *265 mAs/rot* |
| ***Rotation time*** | *0.33 s* |
| ***Slice collimation*** | *0.6 mm* |
| ***Reconstructed slice thickness*** | *0.75 mm* |
| ***Increment*** | *0.5 mm* |
| ***CTDIvol*** | *25.33 mGy* |
| ***Kernel*** | *B26f* |