Fusion techniques for treatment of peripheral interventions

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Disclosure
Speaker name: Yann Gouëffic

I have the following potential conflicts of interest to report:

Receipt of grants/research support
Details: Abbott; Bard; Medtronic; Terumo; WL Gore

Receipt of honoraria and travel support
Details: Abbott; Bard; Boston Sc; Cook; Medtronic; Perouse; Terumo; Spectranetics

Employment in industry
Details: /

Shareholder in a healthcare company
Details: /

Owner of a healthcare company
Details: /

I do not have any potential conflicts of interest to report
Conclusions  Endovascular procedures for pelvic, upper limb, and below-the-knee disease are accompanied with a higher radiation exposure of the operator than with coronary procedures.  (J Am Coll Cardiol Intv 2013;6:1095–102) © 2013 by the American College of Cardiology Foundation
Road mapping for catheter navigation

- Increase X-rays exposure
- 2D X-ray image guidance
- Increase the amount of contrast product
- Temporary
GPS...for catheter
VesselNavigator® (Philips)  
(Fusion software)

- Live 3D catheter navigation for endovascular and hybrid suite solutions
- Designed for use in conjunction with interventional X-ray systems to guide catheters during treatment of vascular disease
- Vessel Navigator fuses live interventional X-ray images with pre-acquired 3D MRI or CT images of the patient’s vascular structures
Advantages

- To enhanced real-time visual guidance, making it easier to maneuver through the vascular network without the need to enhance the X-ray visualization

- To reduce contrast medium usage

- To reduce X-rays exposure
Sources

Local network / External sources (USB key, CD)
AngioCT scan / AngioMRI
One-click vessel segmentation
1. Segmente des vaisseaux

 Sélect. vaisseaux à segmenter et/ou couper une partie de l'anatomie

 Sélect. vaisseaux

 Couper l'anatomie

 Annuler  Répéter

2. Vérifier segment. vaisseau

 Aff. vaisseaux

 Optimiser visualisation

 Prérég. tiss.
Ring markers
1. Placer des repères
   Placer des rep. pr indiquer les ostia, les zones d'atterrissage des stents et d'autres pts d'int. anat.

   Placer le repère anneau
   Placer le repère

2. Stoc. angles de visual.

Optimiser visualisation

Prérég. tiss.
Angulation registration
Image fusion

Two incidences: 0° / 30-60°
Image fusion
Image fusion
Different volume rendering visualization
Femoropopliteal stent implantation
Iliac procedures
Take home message

VesselNavigator® makes easier for PAD:
- Fusion
- Navigation
- Definition of the right projection angle

And could decrease for PAD procedure time, contrast product amount and X-rays exposure.
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