Getting the most of your 3DRA System :

3 Perspectives on Equipment Capabilities and Limitations

Siemens DynaCT

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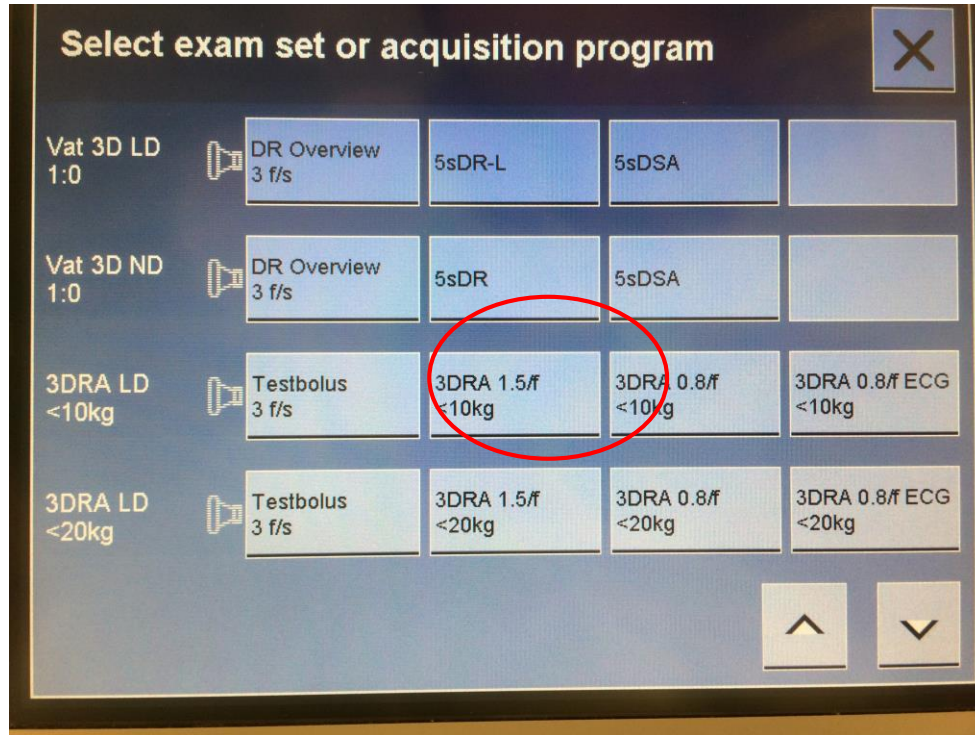
Siemens Dyna CT   Capabilities / Limitations

Doing 3DRA is very different from biplane Angio,

thus achieving top results demands long learning curve
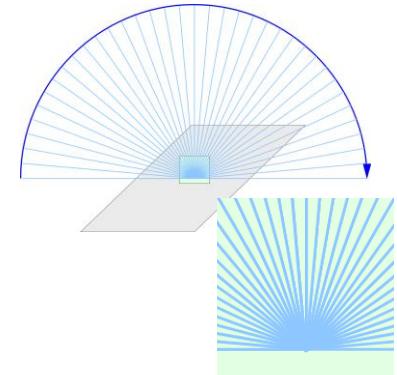
Hardware   -   Software   -   Workflow

Siemens Dyna CT   Capabilities / Limitations

Hardware

+   large detector 48cm, full thorax scan

+   large display, allows to organize information

-   Acquisition Time (5s), adaptable, rotation scan faster (biplane ?),

=> less contrast

-   monoplane rotational Acquisition
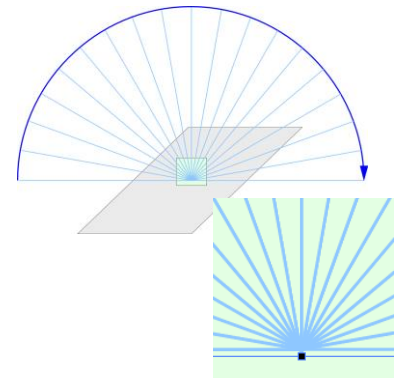
-   so far no implementation / live overlay Echo - Angio

Siemens DynaCT : **Touchpad**

0,8 ° /frame

1,5 ° /frame

Siemens Dyna CT   Capabilities / Limitations

Software

+   2 dataset levels two work with :

actual scan plus one merged dataset (CTA, MRA, former 3DRA),
actual scan duplication (show RH / LH, vessel versus airway etc)

+   airway, merge, duplicate, clipping, hollow figures

-   3D Workstation not linked to logistics for 3D print, CFD, …

-   documentation of result suboptimal (fly through animation)

-   Current PACS systems not ready to present 3D data adequately (pdf)

-   **How to export 3D data for surgical discussions ? AVI …. ???**

Siemens Dyna CT   Capabilities / Limitations

Workflow

+   close contact Siemens / user

-   **Workflow : a lot of help but little knowledge at Siemens**

-   3DRA : how to shorten learning curve ? teaching …

-   Settings not transparent and suboptimal for CHD (1,5 / 0,8 degree/F)

3DRA   OCCULT LPA

HELP !

How to setup treshhold ?

Ramp vs Trapezoid ?

Merge ?

Duplicate ?

Airway ?

Import / Export ?

Help … **to be efficient**

3DRA   MERGE

rotational
angio

RV : long sheath 5Fr, pacing lead
4Fr, 2ml/s, 230/min

AoAsc :   Pigtail 4Fr, 2ml/s

3DRA ROADMAP

Roadmapping :

+ Project 3DRA on A plane

- B plane ? NO !

+ Safe contrast

+ revalidate position by control angio

+ anatomic shift by stiff wires …
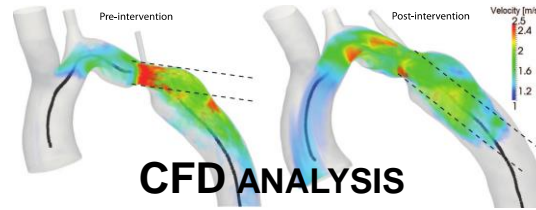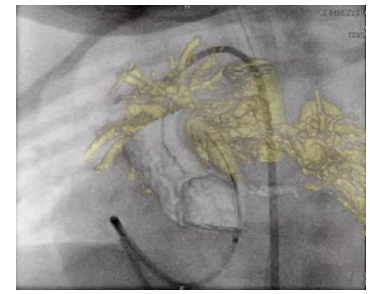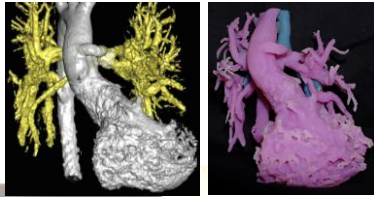
+ entrance in ostia "made easy"

CTA

CMR

"OLD" 3DRA

3DRA CATH INTERVENTION

Pre-intervention

Post-intervention

Velocity [m/s]
2.5
2.4

2

1.6

1.2

1

**CFD ANALYSIS
STATIC / DYNAMIC
DEVICE PREDICTION**
ANSYS

**POST CATH :
PREPARE 3D PRINT**

**DICOM
TECHNICAL "STL"**
MIMICS, ITK-SNAP