

INTEROPERABILITY OF 3-D ENTERPRISE SOFTWARE

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Disclosures

- *No financial disclosures related to this presentation.*

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Interoperability

- ❑ Ability of one system to exchange data with other systems
- ❑ Eliminates manual data entry/reduces errors
- ❑ Facilitates two-way communication between medical systems
 - RIS exports patient data to CT and PACS
 - CT exports image data to PACS and updates RIS



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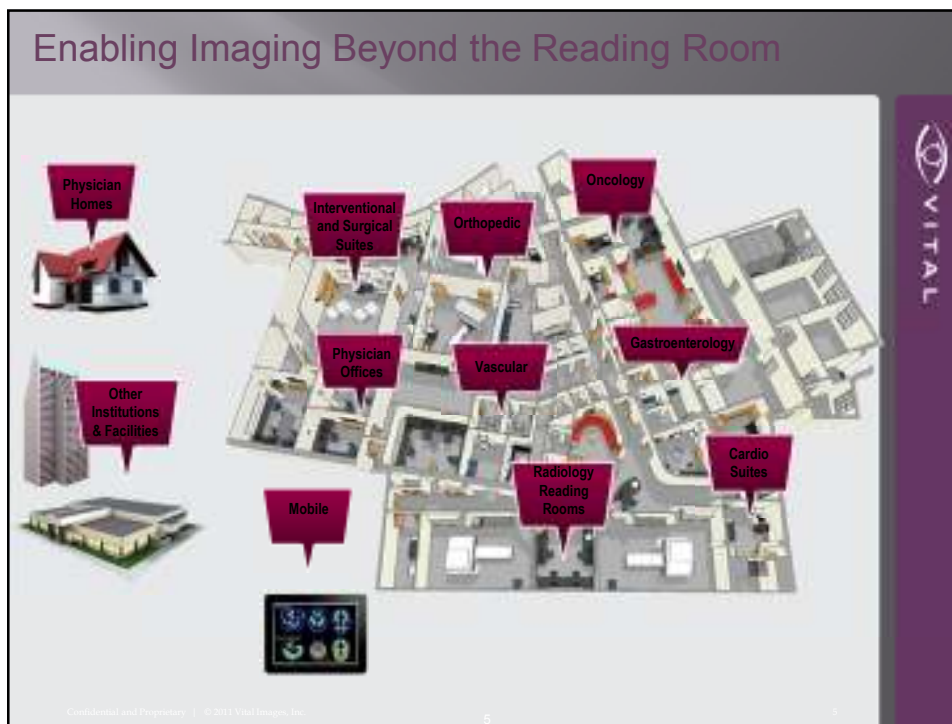
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3D system evaluation

- ❑ Vendor specific vs. neutral
- ❑ Home-grown/limited focus
- ❑ Multi-modality
- ❑ Wide variety measurement tools
- ❑ Anonymization feature
- ❑ Interoperability
 - ❑ Saving/exporting measurements and bookmarks

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3-D Quantitative Data

- ❑ Remains embedded in screen captures
- ❑ Exporting results may be problematic
- ❑ Manually entered into CRF or database
- ❑ Verbally dictated into reports
- ❑ Potential for human error
- ❑ Creates outliers/queries



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24.3 mm (3D) 44.5 mm (3D)

Measurement Description	Major Axis	Minor Axis
Aorta at maximum diameter	45.8	42.5
Right common iliac artery – maximum diameter	31.2	27.5
Right external iliac artery	24.5	2.4
Additional Comments		

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Measurement Workflow

Quantitative results converted to AIM-XML

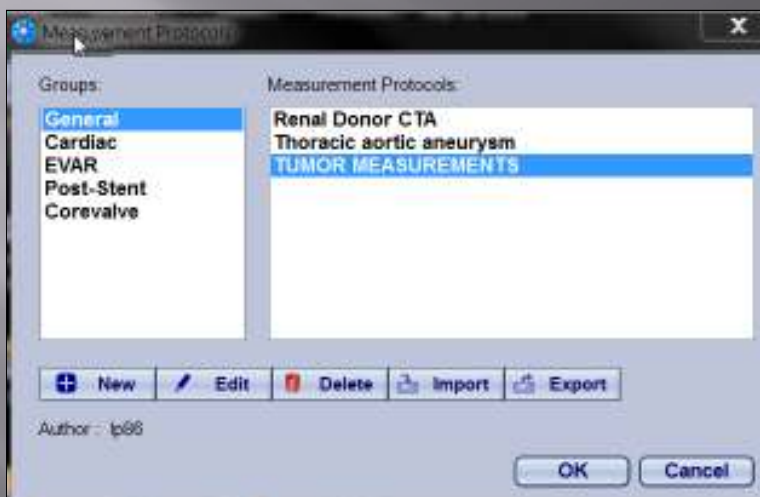
Quantitative results automatically integrated into report

iMuition

PowerScribe® 360

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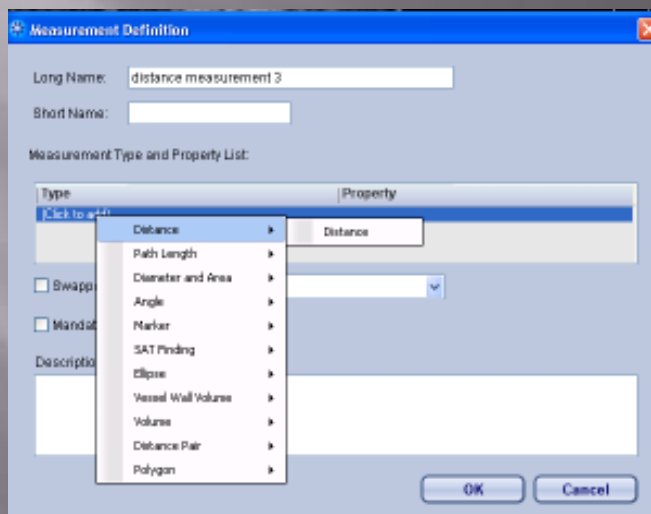
Life of a Measurement



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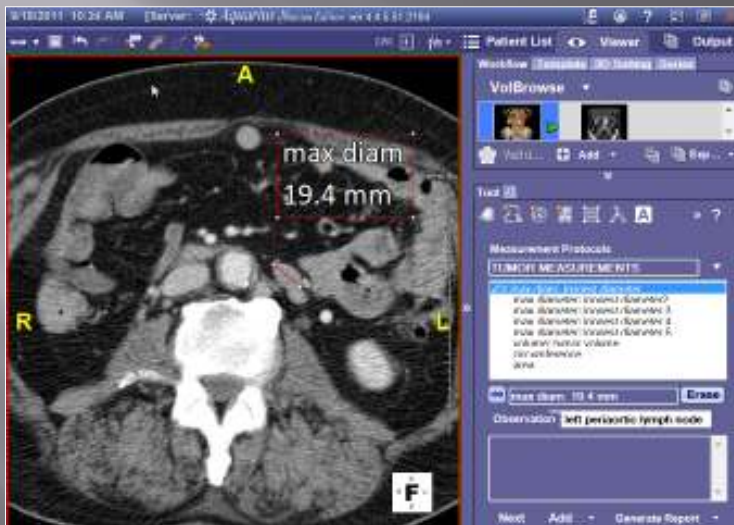
Define Measurements



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Collect Data



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Validate Workflow



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Measurements exported as

- ✓ Xml file
- ✓ AIM xml
- ✓ Text file
- ✓ Csv file
- ✓ Word doc

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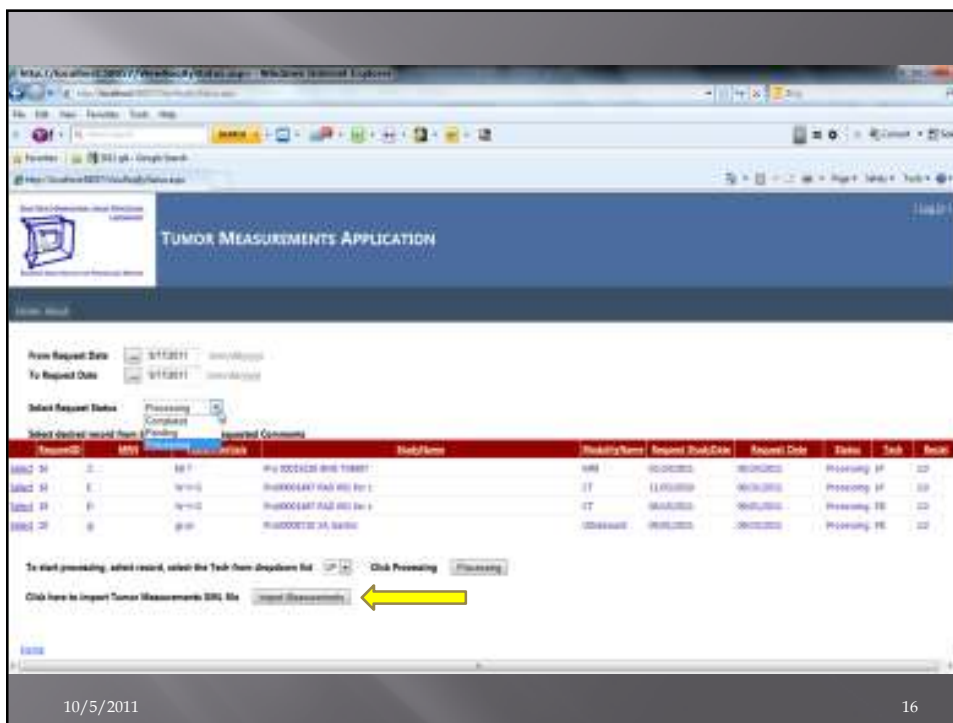
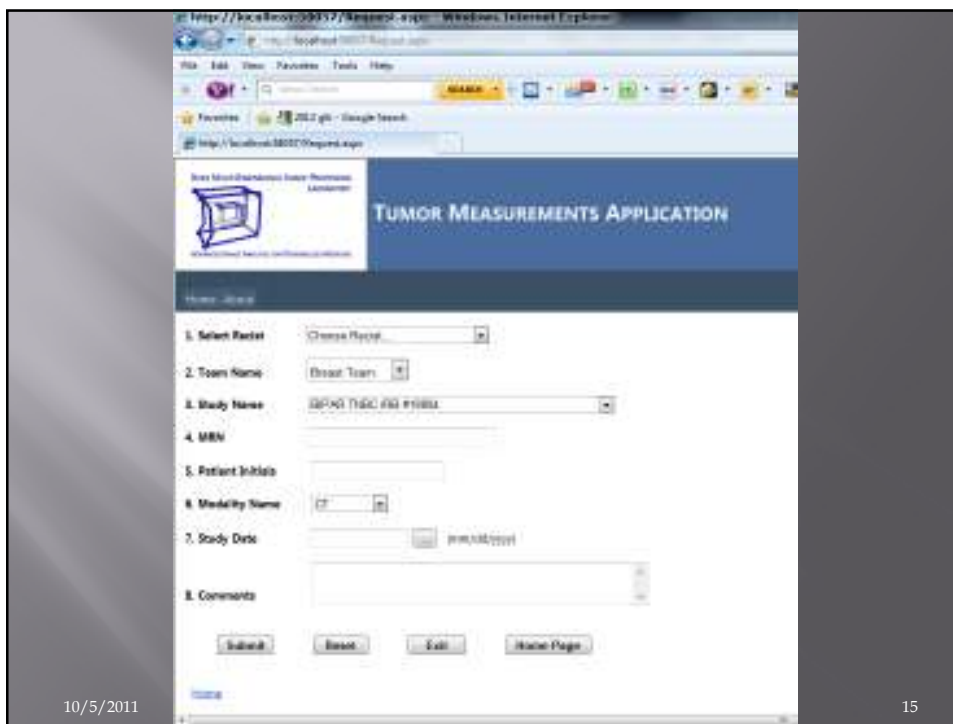
Microsoft Excel - J90519_CT_11082010082829_1709201104514976.csv

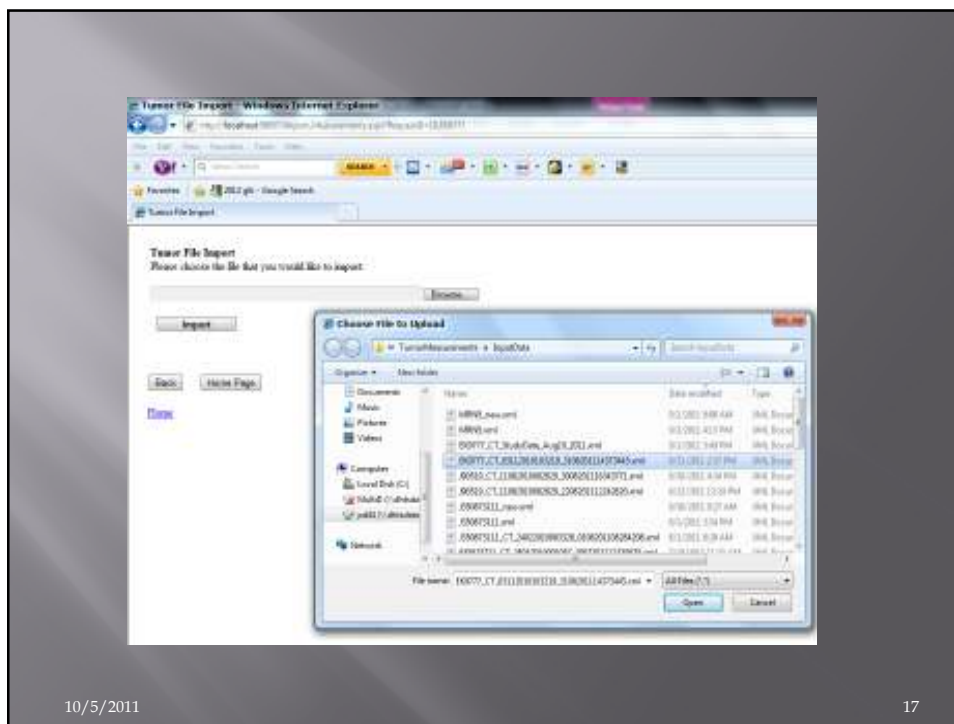
File Edit View Insert Format Tools Data Window Help

H13 fx

	A	B	C	D	E
1	TEST PATIENT				
2	Study Date: 08/11/2010				
3	Report Date: 09/17/2011				
4	User Logged in: scan				
5	User Comments:				
6					
7					
8	diameter	distance measurement 1	19.3 mm		left periaortic node
9					
10	diameter	distance measurement 2	22.3 mm		left inferior periaortic node
11					
12	diameter	distance measurement 3	20.5 mm		left iliac node
13	diameter	distance measurement 4	78.6 mm		prostate
14					
15					
16					

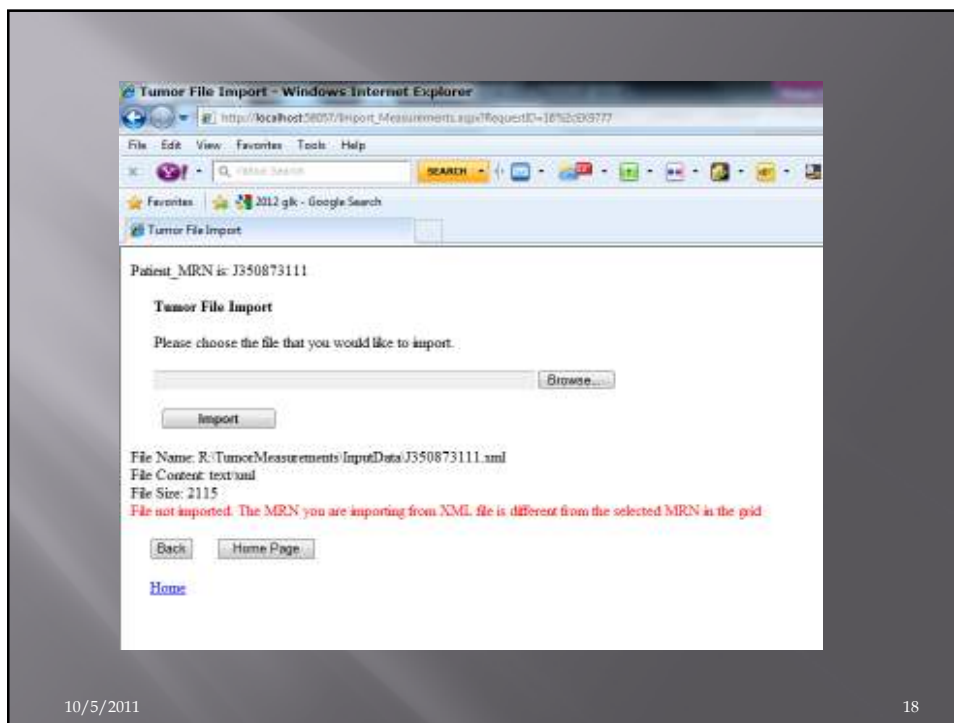
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Internet Information Services Manager

Tumor database

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DUKE MEASUREMENTS APPLICATION

Click to View Imported Data

Target Lesions Data

ReportID	MRN	MeasurementDate	ModalityName	StudyDate	Referring_Physician	Accession	Lesion_Description	Lesion_Status	Site_Location	Tech_Initials	UpdatedDate	
18	EA	09/15/2011	CT	11/03/2010	GEORGE	3008819	soft pancreatic mass		11 cm	2IT	LP	09/15/2011
18	EA	09/15/2011	CT	11/03/2010	GEORGE	3008819	soft tissue base of bladder		2.9 cm	2IT	LP	09/15/2011
18	EA	09/15/2011	CT	11/03/2010	GEORGE	3008819	soft pleural mass		1.9 cm	2IT	LP	09/15/2011

Non-Target Lesions Data

ReportID	MRN	ModalityName	StudyDate	Lesion_ID	Lesion_Description	Lesion_Status	Image_ID	Tech_Initials	UpdatedDate
18	EA	CT	11/03/2010	1	lesion		0	LP	09/15/2011
18	EA	CT	11/03/2010	2	lesion		0	LP	09/15/2011
18	EKL	CT	11/03/2010	3	lesion	Increased	0	LP	09/15/2011
18	EKL	CT	11/03/2010	4	lesion	Decrease	401	LP	09/15/2011
18	EA	CT	11/03/2010	5	lesion	Present	501	LP	09/15/2011

Bone Scan Lesions Data

ReportID	MRN	ModalityName	StudyDate	Lesion_ID	Lesion_Description	Site_Status	Tech_Initials	UpdatedDate
EA100001	18	E	CT	11/03/2010	1	not bone scan	LP	09/15/2011
EA100001	18	E	CT	11/03/2010	2	Decrease	SC	09/15/2011

Verify the above data and click Complete button: ←

Verify the above data and if needed click Re-import button:

[Home](#)

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Thank you for your attention

- Acknowledgements
 - Preeti Bala Devarasetty
 - Philips Healthcare
 - TeraRecon, Inc.
 - Vital Images, Inc.

