

Vascular Interventional Radiology

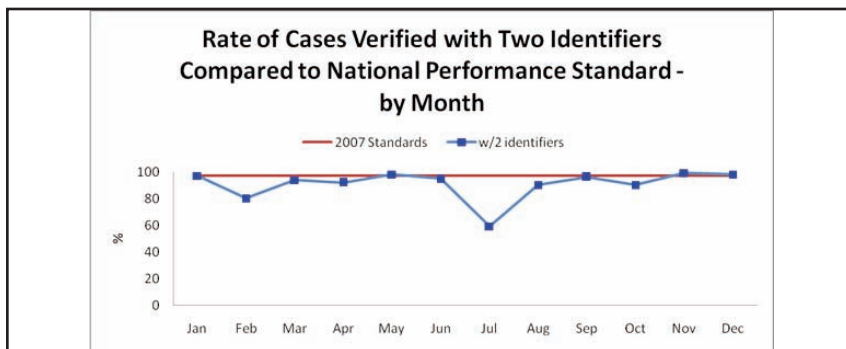
STARVASCULAR™ SUITE

Vascular Interventional Radiology Module Supports Robust Procedure Records, Analytics and Compliance

Streamline the Vascular IR Workflow with Point-of-Care Data Capture and Patient Safety/JCAHO Documentation

Vascular Interventional Radiology (IR) yields a high volume of procedural data and images critical to both patient care and a hospital's success. Additionally, the Vascular IR suite must vigilantly track compliance with national patient safety and JCAHO performance measures. Managing this information can become time-consuming, inefficient and costly for your facility.

LUMEDX's **Vascular Interventional Radiology** module is the first software application of its kind to offer complete data capture of procedural details and patient safety/JCAHO performance measures at the point of care. The module gives physicians and clinicians an effective, efficient workflow to collect common procedural data for tracking case details, compliance, volumes, S & I codes, billing, and more. Performance metrics are immediately available for review and analysis. Further, the Vascular IR module facilitates more comprehensive procedure records and timely, focused reports.



National Safety Performance Metrics

Vascular Interventional Radiology	Account/Order Number: <input type="text" value="78687"/>	<input type="text" value="987765432"/>	Date of Procedure: <input type="text" value="2/14/2009"/>
	Hospital/MRN: <input type="text"/>	<input type="text" value="987765432"/>	Date of Birth: <input type="text" value="4/22/1942"/>
		Age: <input type="text" value="66"/>	Gender: <input type="text" value="Male"/>
Past Medical History & Risk Factors			
Cardio - Vascular			
<input type="checkbox"/> Previous Valve Surgery	<input type="checkbox"/> CHF	<input checked="" type="checkbox"/> Previous PTA	
<input type="checkbox"/> Moderate/Severe Aortic Stenosis	<input type="checkbox"/> NYHA Class III/IV w/in 6 weeks	<input type="checkbox"/> Previous Vascular Surgery	
<input type="checkbox"/> Cerebrovascular Disease	<input type="checkbox"/> Ejection Fraction Assessed	<input type="checkbox"/> Previous Carotid Intervention	
<input type="checkbox"/> Ischemic Heart Disease	Most recent LVEF%: <input type="text"/>	<input type="checkbox"/> Previous MI > 7 days	
<input checked="" type="checkbox"/> ≥ 2 Major Coronary Artery Stenosis ≥ 70%	<input type="checkbox"/> Hx of Atrial Fibrillation/Flutter	<input type="checkbox"/> Previous CABG	
<input type="checkbox"/> Left Main Coronary Artery Stenosis ≥ 50%	<input checked="" type="checkbox"/> PAD	<input type="checkbox"/> Previous PCI	
<input type="checkbox"/> MI w/in 6 weeks	<input type="checkbox"/> DVT	<input type="checkbox"/> Permanent Implant/Pacer	
<input type="checkbox"/> Angina CCS Class III/IV w/in 6 weeks			
Neurological			
<input type="checkbox"/> Stroke Date: <input type="text"/>	<input checked="" type="checkbox"/> TIA Date: <input type="text"/>	<input type="checkbox"/> Amnesia Fugax / TMB	
Respiratory			
<input type="checkbox"/> Sleep Apnea	<input type="checkbox"/> Pulmonary Emboli	<input checked="" type="checkbox"/> Chronic Lung Disease	<input type="checkbox"/> Tracheostomy Present
Endocrine			
<input checked="" type="checkbox"/> Diabetes	Diabetes Control: <input type="text" value="Oral"/>		
GI and GU			
<input type="checkbox"/> Hx Previous Renal Failure	<input type="checkbox"/> GI Ulcer/Bleed	<input type="checkbox"/> Creatinine Assessed	<input type="checkbox"/> Dialysis
Other			
<input type="checkbox"/> Coagulopathy	<input type="checkbox"/> Cancer		
Risk Factors			
<input checked="" type="checkbox"/> Tobacco Use: <input type="text" value="Former"/>	<input checked="" type="checkbox"/> Hypertension	<input type="checkbox"/> Hyperlipidemia	<input type="checkbox"/> ABI <= 0.90
PAD Class: <input type="text" value="IIa - Mild Claudication"/>	Fontaine: <input type="text" value="IIa - Mild Claudication"/>	Rutherford: <input type="text" value="11 - Mild Claudication"/>	

Past Medical History & Risk Factors screen

The Interventional Radiology module collects data for both Vascular IR and General IR procedures.

Features

- Provides **documentation on diagnostic and interventional vascular procedures** common to the interventional radiology suite
- **Robust History and Risk Factor documentation**, including Fontaine and Rutherford classification
- Ability to **document over 400 arteries and veins** (first, second and third order vessels)
- **Supports multiple vessel pathologies:**

- ♦ Lesions including TASC II Classifications and Lesion Characteristics

- ♦ Aneurysms and Aneurysm Characteristics

- ♦ Thrombus and Thrombus Characteristics

- ♦ Other Pathology and Characteristics

- **Detailed documentation specific to Anatomical Region**

- ♦ Cerebrovascular Arteries and Upper Extremity Thoracic Arteries (Aortic Arch Type – Bovine, Type I, Type II and Type III)

- ♦ Abdominal Arteries – Incidental Aneurysm; MR/CT Pre-Measurement for AAA repair

- ♦ Lower Extremity Arteries – Total Number of Vessels During Runoff; Amputations

- Documentation of carotid procedures supports **ACC-NCDR® CARE® Registry** reporting
- **ICD and CPT Codes** can be assigned during or immediately after the case
- **Tracks inventory** used during the case
- **Documents patient safety and JCAHO** performance measures within the case record
- **Includes additional case data** for documentation, such as:

- ♦ Labs Values

- ♦ Procedure Vital Signs and Medications

- ♦ Complications

- ♦ Images

Patient Safety Assessment Performed Prior to Procedure

All Complete

Verified Correct Patient with Two Identifiers
 Verified Procedure to be Performed
 Required Radiological Images Available

Positioned Patient Correctly
 Relevant Documentation Available
 Required Equipment/Supplies Available
 Observed Central Line Protocol & Line in Place
 Assessed LOC, Heart, Lungs, Neck Mobility and Mouth/Teeth Evaluation

Pre-Anesthesia/Conscious Sedation Assessment/Risk Factors

Hx Previous Anesthesia/Conscious Sedation
 Any Adverse Reaction?

Obesity
 Short Neck
 Micrognathia/Retrognathia
 Limited motion of neck/jaw
 Mandible/Maxillary Malocclusion
 Other

Anesthesiologist: Dr. Anesthesiologist
 Anesthesia: General
 ASA Class: 1
 Aldrete Score: Baseline: 0

Pre-Procedure

NPO Date/Time: 2/13/200 11:45:52
 Voided Time: 6:31:08 A
 Foley
 Patient Positioned: Supine

Prep Done
 Side: Bilateral
 Site: Femoral
 Prep: Clipped & Betadine

Procedural Pause/Time Out Completed
 If Yes: Time: 7:00:00 A
 Eulses

Personnel

Attending MD: Dr. Attending
 Diagnostic MD/Position: Dr. Diagnostic
 Interventional MD/Position: Dr. Interventional
 Primary Operator: Dr. Interventional
 Fellow/Position: Dr. Fellow

Staff: Monty Monitor, Cindy Circulator
 Referring MD: Dr. Referring MD
 Referring MD 2: Dr. Referring MD

Patient Safety Assessment Performed Prior to Procedure screen

Vascular Invasive Procedure(s) screen

Access Site Vital Sign Medications ACT ΔAA Evaluation Add Hemo Pressures

Abdominal Vessels

Right Click (Open with Abdominal Vessel Pathology)						
Abdominal Vessel	Location	Pathology	TASC II	Initial Stenosis %	Residual Stenosis	Interv
Abd-Art	Abd. Aorta Infrarenal	Distal				Yes

Vascular Invasive Procedure(s) screen

Benefits

Comprehensive Procedure Record Saves Time, Enables Best Quality Care

The Vascular Interventional Radiology module electronically imports patient-specific data via interfaces with various hospital systems. Information entered manually or interfaced during the case is immediately available for billing, inventory capture, nurse-to-nurse reporting, and patient and metrics reports, saving valuable time for those in the IR suite and across the service line.

Electronic Patient Case Record Facilitates Data Integrity, Expedites Billing

Data capture starts with a report from the transferring unit before the patient is transported to the Interventional Radiology suite. The receiving IR team member then adds pertinent patient information in the electronic case record rather than using a paper-based chart, which can easily be lost or misplaced.

During the case, the IR Tech and/or nurse enter patient and procedural data directly into the record; thus the patient report is complete by case-end. In addition, all billable items and equipment are captured during the procedure to expedite charging.

The post-procedure report augments the telephone report to staff recovering the patient by providing important case details including procedure medications, vital signs and complications.

Professional, Accurate and Timely Reports Increase Physician Satisfaction

The interventional radiologists complete the technique, summary and plan using pick-lists and auto-entry scripts. The physician then electronically signs and distributes the report once complete. The referring

Interventional Radiology Report
 Examination Date: 2/14/2009

Name: AAA, Endovascular VIR
 Gender: Male Date of Birth: 4/22/1942 Age: 66
 Height: 182.88 Weight: 113.4 BMI: 33.91
 Case Number: 9852038 Acct Number: 78687
 Allergies: None Pt. Condition: Stable Aldrete: 10
 ASA: 1

Chronic Medications
 Atenolol; ASA; Glucophage XR

History/Risk Factors
 PAD; Diabetes - Oral; Former Smoker

Indications
 Dissecting Aneurysm

ICD

Description	Code
AAA, Unruptured	441.1

Pre-Procedure Lab Values:
 NA: 142 K+: 4.0 Creat: 0.8 BNP: 56 CRP: 7.5
 WBC: 8.2 HBG: 16.8 HCT: 44.2 PLT: 250
 PT: 12 PTT: 30 INR: 1.0

Pulse(s)

Pulse	Pre-Procedure
Left Posterior Tibial	2+
Right Posterior Tibial	2+
Left Dorsal Pedis	2+
Right Dorsal Pedis	2+

Procedure(s)

Procedure	Status
Aortogram with Runoff	Primary
Stent of Aorta	Primary
Stent of Iliac	Primary

CPT

Description	Code
Aortic Catheter Place (from any access)	36200
Abd Aortogram	75625
Contralateral Iliac 1st order	36245
Ipsilateral Iliac 1st order	36245
Lower Extremity Bil	75716

Page 1 of 3

Name: AAA, Intervention VIR
MR Number: 78687
Date of Procedure: 2/14/2009

Stent Graft Aorta 2 docking limbs	34803 (90)
Stent Graft Aorta 2 docking limbs	75952

Personnel
 PV Diagnostic MD: Dr. Diagnostic Proctor MD: Proctor PV Intervention MD: Dr. Interventional Anesthesiologist: Dr. Anesthesiologist

Name	Position
Morisy	Monitor
Cindy	Circulator
Sally	Scrib

Contrast

Contrast Agent	Type	Dose (cc)
Iovag	Non-Ionic	100

Fluoroscopy Time (min): 12

Diagnostic Procedure
 Diagnostic Runoff Lower Legs:
 Total Vessel Runoff Left: 3 Right: 3

Vascular Anatomy

Anatomical Region	Vessel	Type	Pathology
Abd-Art	Abd. Aorta Infrarenal	Native	Aneurysm
LE-Art	Left External Iliac	Native	Other
LE-Art	Right External Iliac	Native	Other

Endovascular Procedure
 Anatomical Region: Abd-Art
 Vessel Segment: Abd. Aorta Infrarenal
 Pathology Type: Aneurysm

Devices

Peripheral Device Used	Type	Treatment Type
AneurRx	Stent	Deployed

Post Intervention Site Dissection: No
 Distal Emboli: No
 Abrupt Closure: No Perforation: No
 Thrombus: No

Endovascular Procedure
 Anatomical Region: LE-Art
 Vessel Segment: Left External Iliac
 Type: Native
 Pathology Type: Other Pathology

Page 2 of 3

physician receives professional, timely, focused reports that clearly outline ongoing care for the patient.

As the Vascular Interventional Radiology subspecialty grows, IR physicians need better ways to measure their success across each procedure and apply their outcomes to benchmarking parameters. Hospital Administration wants detailed outcomes-to-financial data to ensure the success of the facility. A comprehensive IR suite management solution, LUMEDX's Vascular Interventional Radiology module meets the needs of both parties simultaneously.

Part of a Comprehensive Suite of Information and Imaging Systems

LUMEDX's fully integrated solutions enable your IR staff to:

- Reduce errors resulting from data entry by using an **ADT interface** to import patient demographic data to the procedure record automatically
- Include **PACS images** automatically for more robust procedure reports
- **Electronically distribute procedure reports** containing all data and images to any destination immediately with **Auto-Distribution**; or print reports right at case end
- Easily manage daily, weekly or monthly IR procedures with a simple per-room **scheduling** product
- Review procedure reports through a web portal from any location via **Web-enabled patient records**
- **Capture inventory and charges electronically** at the point of care; inventory is managed on a case-by-case basis and charge data sent automatically to appropriate hospital departments
- Utilize a **performance metrics package** that provides endless data drill-down possibilities to support any preferred analysis and research

About LUMEDX: With over 500 heart center clients worldwide, LUMEDX is the market leader in fully integrated cardiovascular information systems and the No. 1 independent integrator of cardiology information solutions. LUMEDX offers the most proven, comprehensive package of clinical information tools, cardiovascular products, and services to help medical institutions enhance quality of patient care, reduce costs, streamline workflow, increase patient volume and grow revenue.