



## **Scope of Practice for the Registered Cardiovascular Invasive Specialist (RCIS)**

The Cardiac Catheterization Laboratory/Invasive Cardiovascular Laboratory (CCL, ICL) is one of the most unique medical environments in existence today. The goal of the cardiovascular lab is to perform diagnostic exams to obtain sufficient and valid data (hemodynamic and radiologic), and then to perform interventional/therapeutic procedures to treat the disease process while maintaining maximal patient safety and comfort.

### **EDUCATIONAL/PROFESSIONAL BACKGROUNDS OF THE RCIS**

Historically in the CCL/ICL, a physician works with a multi-disciplinary team of professionals to diagnose and treat cardiovascular disease. At various institutions, this team can be comprised of Register Cardiovascular Invasive Specialist (RCIS), Registered Nurses (RN), Licensed Practical Nurses (LPN), Radiologic Technologists (RT(R)), Emergency Medical Technicians (EMTs or Paramedics), Respiratory Therapists (RRT) and other allied health professionals. Each profession brings its own strengths and education to the multi-disciplinary CCL/ICL team.

It is expected that all personnel in the CCL/ICL must be aware of the patient's condition throughout the procedure process and status during procedures at all times. It is necessary for all personnel to maintain a constant vigilance of these parameters.

All personnel need to be fully cross-trained to function in every role in the CCL/ICL. Cross training includes certification in advanced cardiac life support, monitoring and documentation, locating and opening supplies as needed by the physician and operation of all equipment routinely used during procedures. It is therefore reasonable to prepare all CCL/ICL personnel to function comfortably in all positions for all situations commonly encountered during procedures.

The Society of Invasive Cardiovascular Professionals (SICP) maintains that all non-physician CCL/ ICL professionals should demonstrate knowledge by acquiring the RCIS credential through the achievement of invasive cardiovascular credential RCIS. The RCIS credential, administered by Cardiovascular Credentialing International (CCI), has been recognized as the CCL/ICL credential of choice by the American College of Cardiology (ACC) and the Society of Cardiac Angiography and Interventions (SCAI.)

Continuing education will be mandatory in accordance with the requirements set forth by CCI. The RCIS should not assume responsibilities for which they are not adequately educated or trained. It is the obligation of the employing institution to validate an employee's credentials, preparation and knowledge base for which he/she is hired to assume. The RCIS may have the knowledge base or skills to perform, however, individual states have the authority to define specific guidelines related to the scope of practice of medical and allied health specialties. Medication administration and certain medical imaging functions may be restricted for an RCIS who does not hold an RN or RT(R) license in some states.



Ultimately, the responsibility of the catheterization procedure itself remains with the physician of record.

**I. Definition**

The RCIS is a Professional Credential administered by Cardiovascular Credentialing International for all allied health personnel working in the CCL/ICL.

**II Scope of Practice**

- A.** Performs/Reviews baseline patient assessments
- B.** Evaluates patient response to diagnostic or interventional maneuvers and medications during CCL procedures
- C.** Provides patient care pre, intra, and post procedure
  - 1. Participates in team huddle, time-out, and all aspects of procedure as suggested for patient safety by the Joint Commission and other accrediting organization
- D.** Administers medication drug under the direction of a qualified physician
- E.** Acts as the first assistant during diagnostic and therapeutic catheterization procedures.
- F.** Maintains certification in Basic and Advanced Cardiac Life Support (pediatric advanced life support / PALS if working with children) as recommended by the American Heart Association. The Invasive Cardiovascular Professional is proficient in the use of emergency equipment.
- G.** Operates and maintains all diagnostic and therapeutic equipment. Operates under the direct supervision of a board certified or eligible physician with privileges to perform invasive cardiovascular procedures at their medical facility. These physician specialists may include:
  - 1. Cardiologists
  - 2. Cardiothoracic Surgeons
  - 3. Radiologists
  - 4. Vascular Medicine Specialists
  - 5. Vascular Surgeons
  - 6. Neurologists
  - 7. Neurosurgeons
  - 8. Doctor of Osteopath
- H.** Assists or performs procedures under direct supervision in the CCL/ICL or other procedure areas such as:
  - 1. Radiology
  - 2. Operating Room
  - 3. Intensive Care Unit
  - 4. Specialty Clinic
  - 5. Other areas as necessitated or allowed by circumstances and equipment availability.



### III. Pre-Procedure role of the RCIS

- A. Performs patient assessment
  - 1. History and Physical
    - a. Chief complaint
    - b. History of present illness and current medications
    - c. Past medical history
    - d. Family/social history
    - e. Reviews pertinent lab work
    - f. Reviews ECG and Chest X-ray
  - 2. Receives Hand-off Communication report from hospital unit, emergency room or transferring facility
- B. Prepares patient for procedure in Prep/Recovery Area and Procedure Room
  - 1. Participates in pre procedure huddle
    - a. Performs patient teaching
    - b. Obtains Intravenous Access
    - c. Sets up non-invasive monitoring - ECG, Blood Pressure Cuff, Pulse Oximetry, etc.
    - d. Inserts Foley Catheter as needed

### IV. Procedural roles of the Scrub Assistant

- A. Draping of Patient
  - 1. Utilizes appropriate aseptic/sterile technique
  - 2. Preps access site with antiseptic solution
  - 3. Appropriately drapes procedural access site
  - 4. Administers local anesthetic for vascular access

#### ***Scrub Duties Performed Under Direct Physician Supervision:***

- 1. Performs arterial and venous access
  - 2. Facilitate insertion and manipulation of guidewires and catheters into vasculature under fluoroscopic guidance for diagnostic and interventional purposes
  - 3. Obtains invasive hemodynamic data, cardiac output, and blood samples
  - 4. Injects contrast manually or with the aid of a mechanical contrast device to visualize cardiovascular anatomical structures (angiography, venography, etc.)
- B. Administers medication in accordance to physician orders or ACLS protocol.
    - 1. Facilitates acquisition Myocardial Biopsy tissue samples



- C.** Operation of Imaging Equipment
1. Applies radiation safety principles to minimize exposure to patient, self and others
  2. Activates fluoroscopic imaging
  3. manipulate imaging equipment to optimally define anatomy
  4. Selects magnification acquisition technique specific for procedure and anatomy
  5. Performs post processing of acquired images
    - a. Quantitative Analysis
    - b. Digital Subtraction
    - c. Image annotation
  6. Storage and Quality Assurance of digital imaging and hard copy films
  7. Operates Intravascular Ultrasound/Intracardiac Echocardiography (IVUS/ICE) and other catheter based imaging modalities
  8. Operates other imaging modalities as indicated to perform procedures in the CCL/ ICL
- D.** Procedure Circulator
1. Administers medication in accordance to physician orders or ACLS protocol
  2. Patient Care and Assessment
  3. Maintain introrprocedure sterile field and equipment supply
  4. Sets up and operates ancillary procedure equipment
    - a. Contrast Injectors
    - b. IVUS/ICE
    - c. FFR/CFR
    - d. Atherectomy/Thrombectomy Devices
    - e. Intra-aortic Balloon Pump
    - f. Percutaneous Ventricular Assist Devices
    - g. Atherectomy/Thrombectomy device consoles
    - h. Exhimer Laser console
    - i. Transvenous pacemaker generator
    - j. Other diagnostic, interventional, and mechanical support devices.
  5. Point of Care Testing (Operation and Quality Assurance)
    - a. ACT and other Coagulation Studies
    - b. Whole Blood Oximetry
    - c. Platelet Function Assays
    - d. Glucometry
    - e. ABG
    - f. BMP/CBC
    - g. BNP
    - h. Troponin
    - i. Other POCT tests
  6. Assists and performs all roles during emergency resuscitation
    - a. CPR
    - b. Cardioversion
    - c. Defibrillation
    - d. Airway management
    - e. External and Internal Pacing
    - f. Administers ACLS medications



- E. Patient Monitoring and Procedure Documentation**
  - 1. Operates Physiologic Monitoring Equipment
    - a. Recognizes normal and abnormal ECG rhythms
    - b. Recognizes cardiac ischemia, injury, and infarction patterns
    - c. Set up and calibrate pressure transducer
    - d. Properly identify, label, sample, and recognize normal and abnormal intracardiac and vascular pressure waveforms
    - e. Identify Damped and Ventricularized waveforms and notifies other team members.
  - 2. Procedural Database / Electronic Medical Record
    - a. Complete and accurate documentation of all aspects of procedure
    - b. Captures/documents data elements per facility protocol
    - c. Captures and inputs data for procedural calculations
  
- F. Post Procedure Recovery (Procedure Room, Prep/Recovery, or Hospital Unit)**
  - 1. Management of Procedure Site
    - a. Access Site Management/Hemostasis
      - 1. Manual sheath removal
      - 2. Compression Device
      - 3. Vascular Closure Devices
      - 4. Skin Manipulation
      - 5. Pocket closure
      - 6. Suture stabilization of equipment
    - b. Patient care and assessment, monitoring and documentation
      - 1. ECG
      - 2. Vital signs
      - 3. Level Of Consciousness
      - 4. Procedure access site post hemostasis
        - a) Identify, monitor, compress hematomas
        - b) Palpate and assess distal pulses
      - 5. Ambulation
      - 6. Discharge teaching