ACR Accreditation: A Regional Radiation Oncology Network’s Quest

Charles M. Able, MS
Allan F. deGuzman, PhD
South East Chapter
American Association of Physicist in Medicine
April 20, 2012
The following aspects, as they relate to preparation for ACR Accreditation will be presented:

- Organization and Implementation of Continuous Quality Improvement
- Practice Assessment: ACR guidelines, ASTRO Guidelines, and TG Reports
- Establishment and/or refinement of the Comprehensive QA Program
- Metrics and the Quality Improvement Team
A fundamental commitment to high quality care.
High Point, NC – WFU Regional Practice

- Received ACR Accreditation in March 2009
- 1 of only 3 North Carolina facilities accredited in 2009, the total now stands at 6
- Clinical Practice included:
  - IMRT
  - IGRT delivery
  - HDR Brachytherapy
  - LDR Brachytherapy
Wake Forest decided in 2011 to seek ACR Accreditation of its Comprehensive Cancer Center and all 4 of its Regional Practices.

- Academic center
  - Gamma Knife
  - SRS, SBRT, IGRT, IMRT (sliding window and VMAT)
  - HDR & LDR Brachytherapy
- Independent Regional Practice
  - Local Facility Management
  - Independent Budgets
  - Clinical Practice specific to referral base
What is the vision for our practice as it relates to quality and quality improvement?

What structure will work best?

Do we currently practice according to all ACR - ASTRO Practice Guidelines?
Two decisions were made that provided some direction in addressing these questions.

1. An overall practice quality improvement structure that emphasized standardization, accountability, and evaluation using metrics would be necessary.

2. Each practice would be evaluated using the criteria put forth in ACR, ASTRO, and AAPM practice and/or technical guidelines.
Physicians Must Lead this Endeavor

Impossible Expectations

Physicist

Successful Team

Physician

WFU CQI Committee
Quality Improvement Program Structure

WFU Continuous Quality Improvement Committee

WFU Radiation Therapy Department: Standard Technical Procedures

Regional Practice Quality Improvement Team
Physician leadership is critical to the success of the initiative.
Regional Practice Quality Improvement (QI) Team

- Medical Director of Practice
- Chief Physicist
- Chief Radiation Therapist
- Administrative Director

Physician leadership is critical to the success of the initiative.
Quality Improvement Program Structure

CQI Committee Responsibilities

- Evaluation of Quality Improvement Metrics
- Provide Oversight and Leadership to CQI Teams
- Annual Review of Technical Standard Procedures
- Annual Review of Radiation Safety Program
- Annual Review of Departmental Policies
- Annual Review of Brachytherapy Program
- Annual Review of External Beam Treatment Program
- Annual Review of Equipment QA Reports & Program
- Tracking of Morbidity and Mortality
- Tracking treatment deviations and incident reports
- Evaluation of Quality Improvement Metrics
- Physician Peer Review
Quality Improvement Program Structure

WFU Continuous Quality Improvement Committee

WFU Radiation Therapy Department: Standard Technical Procedures

Regional Practice Quality Improvement Team
Practice Self Assessment
What is the ACR Self Assessment?

The self assessment is a questionnaire that reviews all aspects of radiation oncology practice based upon the current ACR practice and technical guidelines, ASTRO guidelines, and AAPM Task Group Reports.
- Radiation Oncology Practice Guidelines
- 3D Conformal Treatment Practice Guidelines
- IMRT Practice Guidelines
- IGRT Practice Guidelines
- SRS Practice Guidelines
- SBRT Practice Guidelines
- LDR Practice Guidelines
- HDR Practice Guidelines
# American College of Radiology

## Section C Practice Self Assessment

These questions are based on recommendations frequently made to facilities by the ACR Radiation Oncology Practice Accreditation Program Committee.

<table>
<thead>
<tr>
<th>Assessment Element</th>
<th>Yes</th>
<th>No, Explain</th>
<th>Reviewer’s Comments</th>
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</thead>
<tbody>
<tr>
<td>1A. Treatment prescriptions are signed by the radiation oncologist prior to initiation of radiation therapy</td>
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<td>1B. Treatment prescriptions include:</td>
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<tr>
<td>Volume</td>
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<td>Description of portals (i.e., AP, PA, lateral, etc.)</td>
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<td>Radiation modality</td>
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<tr>
<td>Dose per fraction</td>
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<td>Number of fractions per day</td>
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<td>Number of fractions per week</td>
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<tr>
<td>Total number of fractions</td>
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<tr>
<td>Total tumor dose</td>
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<td>Prescription point or isodose</td>
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<td>2A. Portal verification films/images are performed:</td>
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<tr>
<td>For any new fields (including field changes)</td>
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<td>At least every 5-10 treatments</td>
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<tr>
<td>2B. All port films/images are labeled with:</td>
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<tr>
<td>The patient’s name</td>
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<td>Date taken</td>
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<tr>
<td>Field size</td>
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<tr>
<td>Direction of the beam</td>
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<tr>
<td>Reviewing Radiation Oncologist’s initials/signature and date</td>
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<tr>
<td>3. At the completion of treatment, the qualified medical physicist reviews the entire chart to affirm the fulfillment of the initial and/or revised prescription dose. The review is documented by the physicist’s initials/signature and date.</td>
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</table>
Facility physicist, physician, and administrator completed the self assessment document.

We reviewed the facility results and clarified some of the questions contained in the self assessment.

Collectively determine which areas were compliant and where additional work is required.
WFU Radiation Therapy Department: Standard Technical Procedures

- Departmental Policies & Guidelines
- Clinical Physics & Technical Procedures and Guidelines
Review of Standard Technical Procedures

Clinical Physics & Technical Procedures and Guidelines

- General (Professional) Guidelines: Physicist (Section A)
- Radiation Safety-Protection (Section B)
- QA of Clinical Processes & Radiotherapy Equipment (Section C)
Review of Standard Technical Procedures

Clinical Physics & Technical Procedures and Guidelines

- General (Professional) Guidelines: Physicist (Section A)
- Radiation Safety-Protection (Section B)
- QA of Clinical Processes & Radiotherapy Equipment (Section C)
Review of Standard Technical Procedures

Equipment QA (C1)
- Accelerator & Simulator (C1.1)
- Treatment Planning Systems (C1.2)
- CT/PET (C1.3)
- MR (C1.4)
- Gamma Knife (C1.5)
- Instrumentation (chambers, electrometers, etc.) (C1.6)
- HDR System (C1.7)
- New Equipment (C1.8)

QA of Clinical Processes (C2)
- Chart Checks (C2.1)
- Current Patients
- New Patients
- Photon Beams (C2.2.1)
- Electron Beam (C2.2.2)
- Brachytherapy (C2.2.3)
- In-Vivo Dosimetry (C2.2.4)
- Gamma Knife (C2.3.1.1)
- SBRT (C2.3.1.2)
- IMRT (C2.3.1.3)
- IGRT (C2.3.1.4)
- LDR Seeds (C2.3.2.1)
- HDR (C2.3.2.2)
- Iotrex (C2.3.2.3)
- 3D-RT (C2.3.1.5)
- Electrons (C2.3.1.6)
Review of Standard Technical Procedures

- Equipment QA (C1)
- QA of Clinical Processes (C2)
  - Chart Checks (C2.1)
  - Dose Calculation Methodology (C2.2)
  - Physician Peer Review and QA
    - External Beam (C2.3.1)
    - Brachytherapy (C2.3.2)
  - Treatment Process Guidelines (C2.3)
What is the time commitment required?

It depends on your size and clinical techniques in your practice.
Each clinical area (nursing, physics/dosimetry, therapist, & physician) should have ongoing projects to track critical aspects of treatment.

- Total time from simulation to plan approval
- Magnitude of daily shifts for IGRT patients
- Number of therapist logged on at the time of patient treatment
- Magnitude of setup deviation from plan values on the first day of treatment
- Measured dose deviation from plan dose during IMRT QA by body site or delivery technique
Accreditation should be the result of a fundamental commitment to high quality care.
Thank You!
¡Gracias!
Grazie!
Merci!
Asante!
Vielen Dank!