

AbstractID: 8498 Title: A Structured Approach to Constructing a Radiation Oncology Physics Residency Program

Purpose: This paper describes systematic choices and their rationale for structuring a curriculum for a Radiation Oncology Physics Residency accreditable by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP). **Method and Materials:** The AAPM Report No. 90, "Essentials and Guidelines for Hospital-based Medical Physics Residency Training Programs" lists ten rotation topics related to routine clinical treatment planning and delivery procedures and processes and the technical support and quality assurance that support them. The procedures implemented in a specific radiotherapy department depend upon the equipment and software purchased by the facility as well as the individual preferences of the radiation oncologists and staff of the department. Specific procedures and processes appropriate for the rotation categories were identified and listed. However, an approach to developing a Resident's competency performing the processes can be generalized into three phases. In Phase I the Resident observes a Mentor carry out the process and reads background material. In Phase II the Resident carries out the process under close supervision by the Mentor. In Phase III the Resident carries out the process independently. The Mentor documents satisfactory completion of each phase. The Assessment of the Resident's competency is completed by oral examinations by the Residency Program Faculty. **Results:** The approach was applied to writing a Self-Study Document for CAMPEP. The document contained a detailed description of ten competency-based rotations using the three phase format. The descriptions of the rotations composed the majority of the 233-page study. **Conclusion:** A Radiation Oncology Physics Residency Program can be systematically constructed by identifying processes and procedures associated with AAPM Report No. 90 competencies and then developing the Resident's competencies with these processes and procedures in three phases.

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