

# RPC WEBPAGE NEWSLETTER

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## RPC- RDS: Are you confused?

We hear occasionally from medical physicists who are aware of the existence of the Radiological Physics Center (RPC) and of Radiation Dosimetry Services (RDS) but are not sure of the relationship between the two entities. The intent of this issue of the newsletter is to clarify the situation.

The RPC is funded by the National Cancer Institute (NCI) to monitor quality assurance at radiation therapy facilities participating in NCI-Sponsored Clinical Trials. Our monitoring procedures include visits to institutions, reviews of patient treatment records, and a mailed TLD monitoring program.

The RPC also uses anthropomorphic phantoms of various anatomic sites to evaluate dosimetry at institutions that participate in specific clinical trials. For example, a brain phantom intended for stereotactic treatment has been used by institutions participating in an RTOG clinical trial addressing stereotactic treatment of brain tumors.

RDS provides several of the same monitoring services, but does so on a fee-for-service basis. For example, RDS offers a TLD beam calibration monitoring service that is essentially identical to the service offered by the RPC. RDS also offers the stereotactic brain phantom described in the preceding paragraph.

So what's the difference?

The difference is simply that RDS offers these services at the request of a radiation therapy facility. The services are provided for a reasonable fee, and efforts are made to accommodate the requirements of individual institutions. For example, TLDs may be mailed at essentially at any frequency requested, from a single measurement, to a complete set of dosimeters as frequently as quarterly. The brain phantom (and, in the near future, other phantoms developed by the RPC) is available upon request. RDS offers other services, including measurements of absorbed dose from blood irradiators and measurements of photoneutrons from linear accelerators.

Frequently, institutions that have been purchasing services from RDS join a clinical trial and then are referred to RPC for monitoring. When this happens, RPC and RDS work together to make sure that the needs of both the institution and study groups are met. Sometimes, this means that the institution continues to receive TLDs only from RDS, and some of these TLDs are read by RPC to satisfy the requirements of the NCI. In other circumstances, institutions choose to receive TLDs from the RPC, and purchase additional dosimeters from RDS to enable monitoring at greater frequencies. For these institutions, RPC and RDS coordinate their activities as much as possible to ease the burden on the institution.

The RPC and RDS are both located administratively in the Section of Outreach Physics, within the Department of Radiation Physics at M.D. Anderson Cancer Center in Houston. They are physically located in the same building; a medical office building on South Main Street, about a mile from the cancer center itself. RPC and RDS have similar but separate equipment for reading TLDs and radiochromic film, and follow nearly identical procedures of irradiating standard TLDs for comparison with the mailed samples. There is some overlap among the staff to most effectively handle the workload, and also to ensure that new procedures and valuable experiences are transferred effectively between the two groups.

For previous issues of the RPC Newsletter, please visit the FAQ page.