

Medical Dosimetrists

SOC: 29-2036 • Career Profile Report

■ Key Facts

\$138,110 Median Salary	4,800 Employment	+3.0% Growth Rate
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■ Requirements & Salary Range

Education: Bachelor's degree

■ Automation Risk Assessment

Low Risk - 8.0% probability of being automated in the next 10-20 years.
This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■ Work-Life Balance

5.1/10 - Fair work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	5.4/10	Investigative	8.6/10
Artistic	4.8/10	Social	9.0/10
Enterprising	5.4/10	Conventional	6.2/10

■ Top Skills Required

Communication skills, Critical-thinking skills, Detail oriented, Interpersonal skills, Math skills, Technical skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Medical Dosimetrists typically perform the following tasks:

- Design the arrangement of radiation fields to reduce exposure to critical patient structures, such as organs, using computers, manuals, and guides.
- Plan the use of beam modifying devices, such as compensators, shields, and wedge filters, to ensure safe and effective delivery of radiation treatment.
- Identify and outline bodily structures, using imaging procedures, such as x-ray, magnetic resonance imaging, computed tomography, or positron emission tomography.
- Calculate the delivery of radiation treatment, such as the amount or extent of radiation per session, based on the prescribed course of radiation therapy.
- Calculate, or verify calculations of, prescribed radiation doses.
- Develop radiation treatment plans in consultation with members of the radiation oncology team.
- Supervise or perform simulations for tumor localizations, using imaging methods such as magnetic resonance imaging, computed tomography, or positron emission tomography scans.
- Create and transfer reference images and localization markers for treatment delivery, using image-guided radiation therapy.
- Record patient information, such as radiation doses administered, in patient records.
- Advise oncology team members on use of beam modifying or immobilization devices in radiation treatment plans.
- Fabricate beam modifying devices, such as compensators, shields, and wedge filters.
- Perform quality assurance system checks, such as calibrations, on treatment planning computers.
- Fabricate patient immobilization devices, such as molds or casts, for radiation delivery.
- Develop requirements for the use of patient immobilization devices and positioning aides, such as molds or casts, as part of treatment plans to ensure accurate delivery of radiation and comfort of patient.
- Teach medical dosimetry, including its application, to students, radiation therapists, or residents.
- Conduct radiation oncology-related research, such as improving computer treatment planning systems or developing new treatment devices.
- Develop treatment plans, and calculate doses for brachytherapy procedures.
- Measure the amount of radioactivity in patients or equipment, using radiation monitoring devices.
- Educate patients regarding treatment plans, physiological reactions to treatment, or post-treatment care.