

# MANAGING PATIENTS WITH ICDs

## ICDs and radiotherapy

### Key take-away points

- Patients with ICDs are able to receive radiotherapy.
- Device should not be in the main ionizing beam.
- Cumulative radiation thresholds for each device differ depending on the manufacturer, so check before therapy commences.



### Radiation

Beam	Interaction	Hazard
Direct or scattered radiation (and EMI)	ICD detects radiation as intrinsic cardiac activity	Device delivers anti-tachycardia therapy (ATP or defibrillation)
Neutron beam photon beam >10 MV	Temporary exposure to direct or scattered neutrons	Electrical reset
Accumulated dose of direct/scattered radiation	Device circuitry can be permanently affected by radiation	Permanent failure in device function

Not directly within treatment beam



Cumulative dose



### Notes