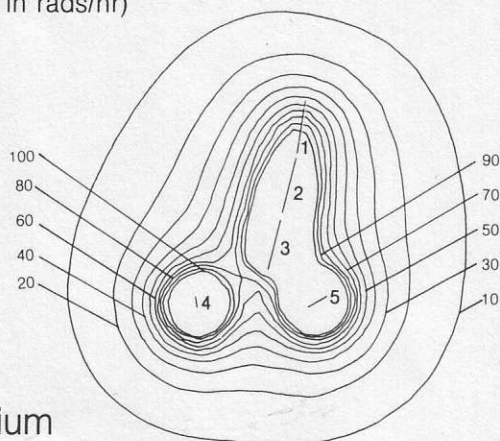


# Theoretical Isodose Curves (dosage in rads/hr)

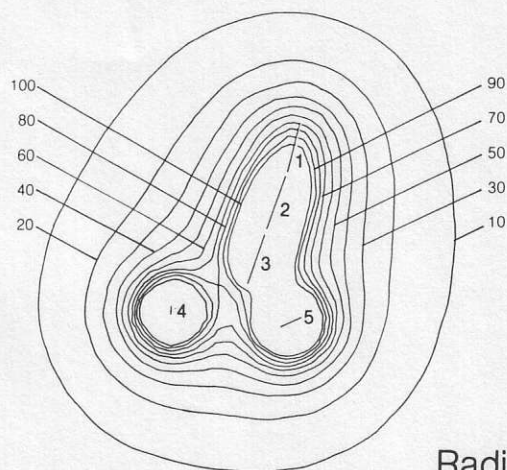
Cesium



Cesium Sources:  
in tandem: No. 1 = 15 mg Ra eq  
No. 2 = 10 mg Ra eq  
No. 3 = 10 mg Ra eq  
in ovoids: No. 4 = 15 mg Ra eq  
No. 5 = 15 mg Ra eq

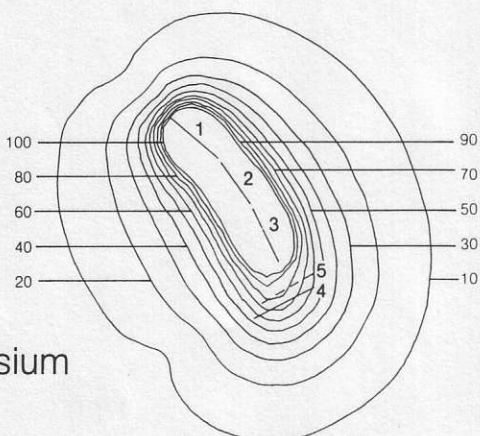
Plane I

Radium



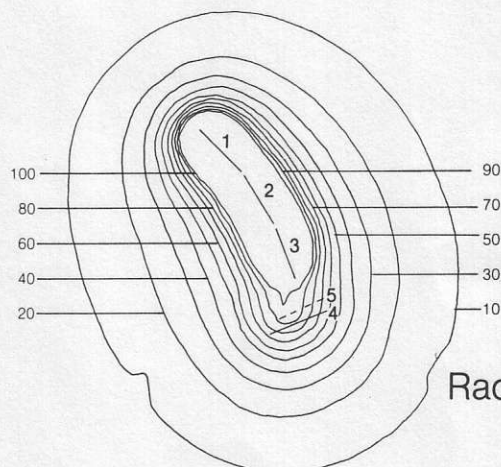
Radium Sources:  
in tandem: No. 1 = 15 mg Ra  
No. 2 = 10 mg Ra  
No. 3 = 10 mg Ra  
in ovoids: No. 4 = 15 mg Ra  
No. 5 = 15 mg Ra

Cesium



Plane II

Radium



As shown in Figure 1, there is a close similarity in dose distribution patterns - and thus in clinical efficacy - between Cs-137 and Ra-226 sources.

Cesium-137's advantage over radium-226 is that it offers definite user safety benefits. The lead half-value layer for Cs-137 is 6 mm, approximately half that for Ra-226. Thus, handling, transporting, and afterloading with Cs-137 sources are safer and easier than with Ra-226. In addition, since Cs-137 does not decay into a radioactive gas as does Ra-226, the possibility of source leakage from pressure build-up and the resulting safety hazards are eliminated.

## Isotope Characteristics: Cesium-137

Energy	Half-Life	Decay Rate/Year	Half-Value Layer (Lead)
mono-energetic 662 keV	30.0 years	2.1%	6 mm