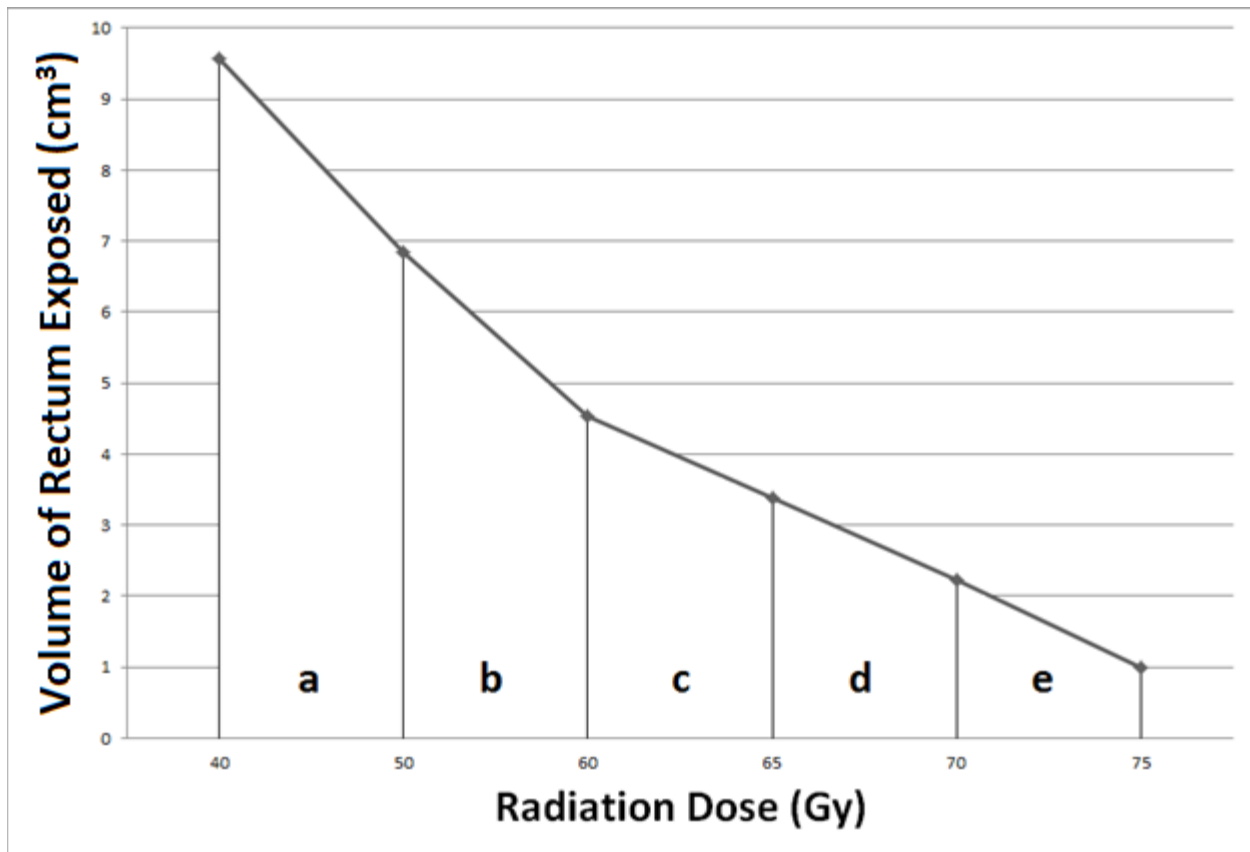


## Supplement 1 – Calculation of AUC for each individual patient



The area under the curve (AUC) measurement is calculated as the sum of areas a, b, c, d, and e for each patient.

- $[\text{Volume of rectum exposed to 40Gy (cc)} + \text{volume of rectum exposed to 50Gy (cc)}] / 2 \times (50\text{Gy} - 40\text{Gy})$
- $[\text{Volume of rectum exposed to 50Gy (cc)} + \text{volume of rectum exposed to 60Gy (cc)}] / 2 \times (60\text{Gy} - 50\text{Gy})$
- $[\text{Volume of rectum exposed to 60Gy (cc)} + \text{volume of rectum exposed to 65Gy (cc)}] / 2 \times (65\text{Gy} - 60\text{Gy})$
- $[\text{Volume of rectum exposed to 65Gy (cc)} + \text{volume of rectum exposed to 70Gy (cc)}] / 2 \times (70\text{Gy} - 65\text{Gy})$
- $[\text{Volume of rectum exposed to 70Gy (cc)} + \text{volume of rectum exposed to 75Gy (cc)}] / 2 \times (75\text{Gy} - 70\text{Gy})$