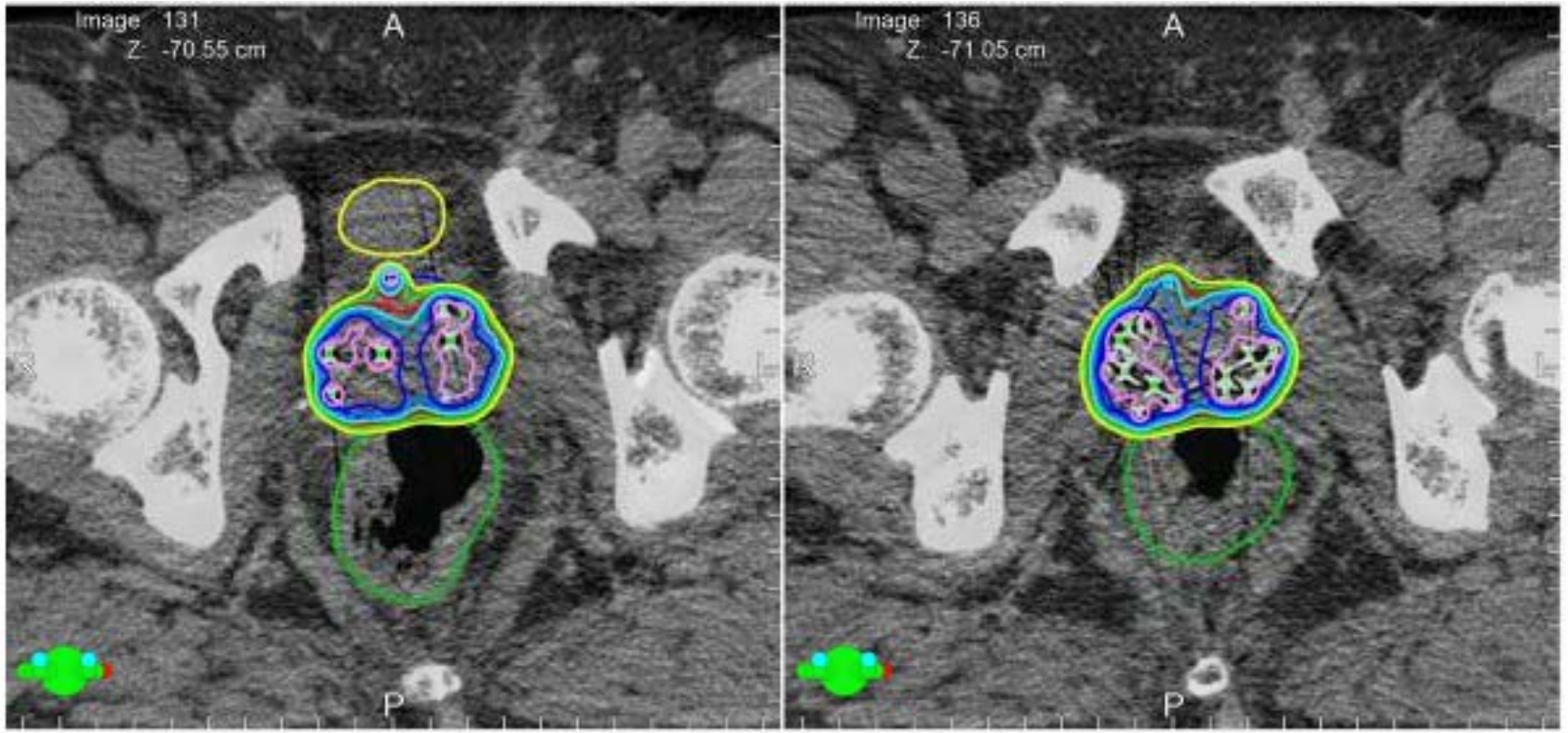
Brachy Study Slides

What type of treatment is shown below?

- What are the structures?
- What and where are the classic points for this treatment?
- What Rx dose would you expect?
- Assess the dose distribution
- What is the orange 1 pointing to?

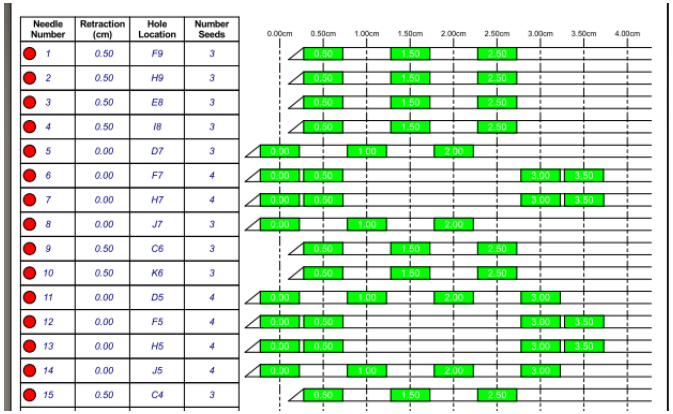
What is the image shown below?



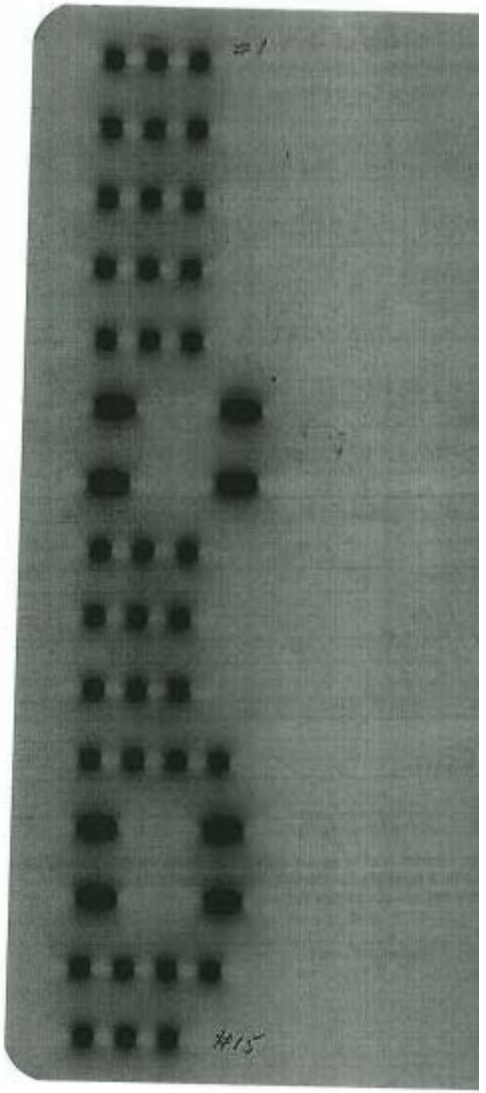
- What are the structures?
- What is the isotope?
- What Rx dose would you expect?
- What type of calculation is used?

What is this?

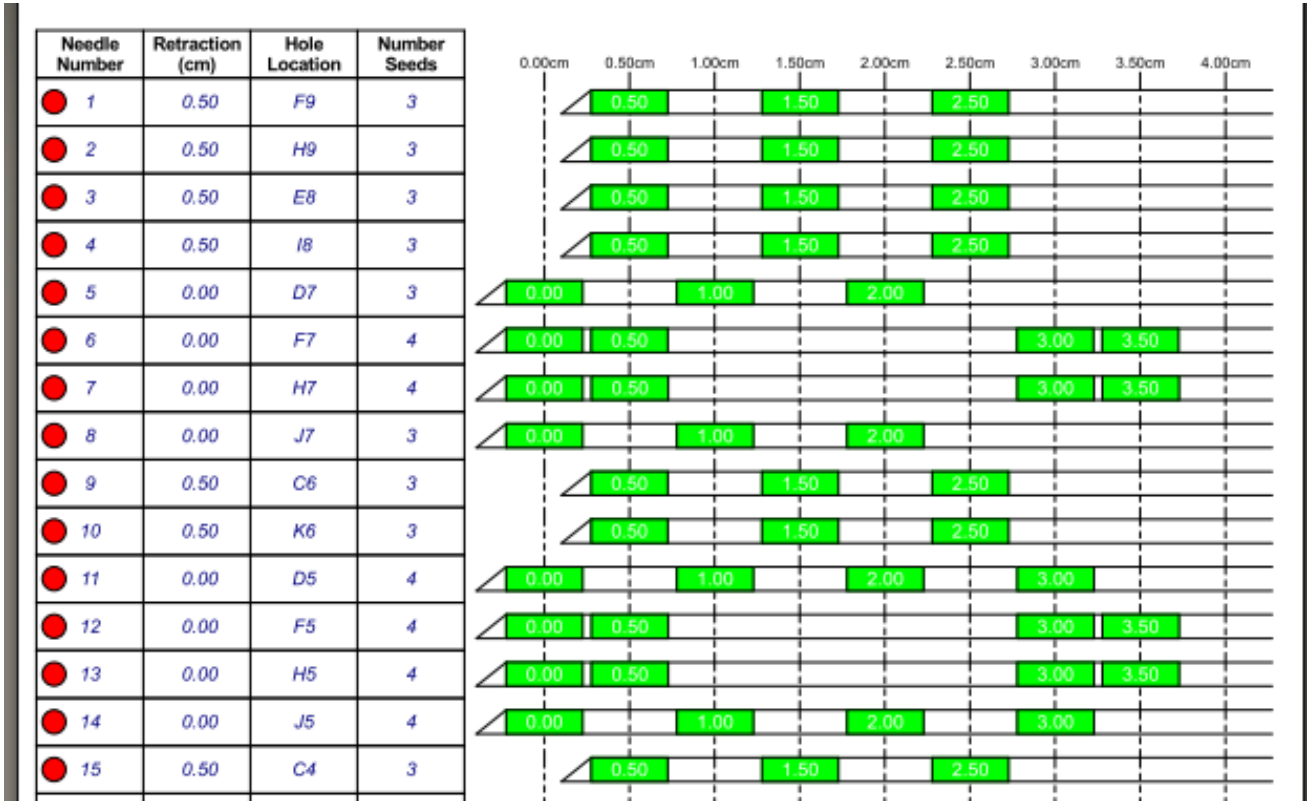
- How is it created?
- What is it used for?
- What other procedures would be performed at this time this is created?



Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	0.50	F9	3
2	0.50	H9	3
3	0.50	E8	3
4	0.50	I8	3
5	0.00	D7	3
6	0.00	F7	4
7	0.00	H7	4
8	0.00	J7	3
9	0.50	C6	3
10	0.50	K6	3
11	0.00	D5	4
12	0.00	F5	4
13	0.00	H5	4
14	0.00	J5	4
15	0.50	C4	3



Prostate needle loading diagram corresponding to previous autoradiograph.



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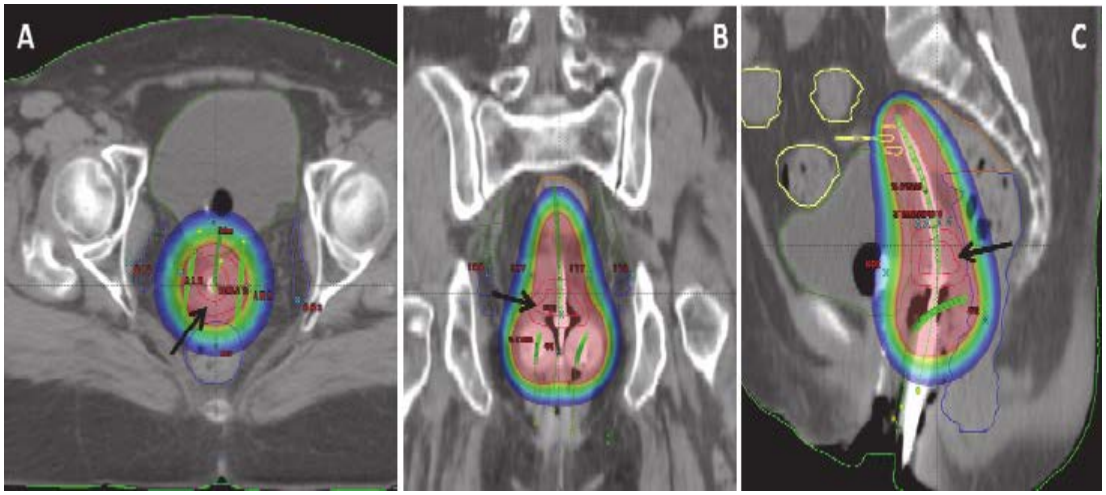
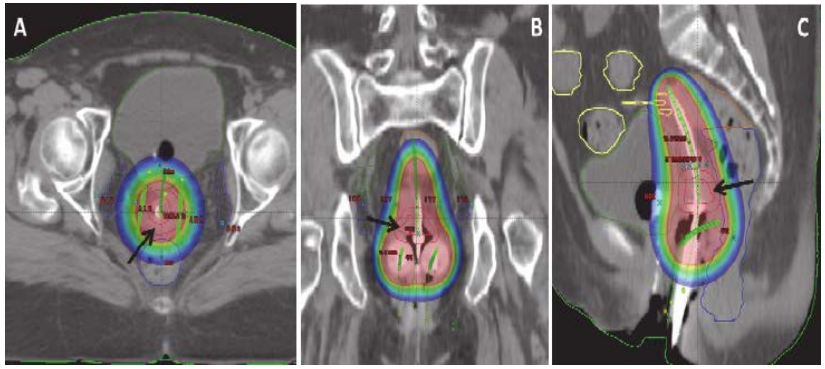
9	0.50	C6	3
10	0.50	K6	3
11	0.00	D5	4
12	0.00	F5	4
13	0.00	H5	4
14	0.00	J5	4
15	0.50	C4	3

What type of treatment is this?



Follow Up Questions

- What is a typical prescription dose?
- Where does your clinic prescribe to?
- What type of source is used in this treatment?
- Walk me through what you would do if the source got stuck during treatment.



What procedure is this used for?

Follow Up Questions

- What sources are used in this procedure?
- How long is the applicator left in place and how does that compare to the source half-life?
- How is dose calculated for these procedures?
  - What limitations in that formalism apply to these cases?

What is this device used for?

Follow Up Questions

- What are some of the important QA procedures for this device?
- What source is used for treatments with this device?
  - Tell me about some of the source characteristics.
- Why don’t we use a different source?

What is the significance of this equation?

$$\dot{D}(r,\theta) = S_K \cdot \Lambda \cdot \frac{G_L(r,\theta)}{G_L(r_0,\theta_0)} \cdot g_L(r) \cdot F(r,\theta)$$

Follow Up Questions

- What is each term in the equation?
- What are some of the assumptions in this equation?
- Why is the modularity of the formalism of importance?
- Where would you get the values for the terms in the equation?

$$\dot{D}(r,\theta) = S_K \cdot \Lambda \cdot \frac{G_L(r,\theta)}{G_L(r_0,\theta_0)} \cdot g_L(r) \cdot F(r,\theta)$$