

Two Case Histories: Office-Based Radiation Therapy for the Dermatology Clinic

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Case 1: Squamous Cell Carcinoma on Distal Pretibial Region

Patient Age: 87 | Sex: Female | Type: Squamous Cell Carcinoma (SCC)

Location: Right Distal Pretibial Region, treated with Superficial Radiation Therapy

Lesion Size: 2 x 1.9 cm | Treatment Margin: 0.5 cm | Field Size (Applicator): 3.0 cm

Number of Treatments	Energy	Depth	Treatment Time	Dose per Treatment	Total Dose
17 (3 per week)	80 kV	0.5 mm	0.89 minutes	300 cGy	5100 cGy

Key Facts

- Prior to this diagnosis, the patient has a history of actinic keratosis, basal cell carcinoma and squamous cell carcinoma.
- The patient had a complete consultation regarding all applicable modalities for the treatment of their skin cancer. Superficial radiation therapy (SRT) was determined to be the optimal treatment method based on a variety of factors including:
 - Tumor type, size and location
 - Relevant medical history
 - Local tissue factors
 - The functional status of the individual, including the ability to perform necessary postoperative wound care
 - The need for simultaneous treatments

Treatment Outcomes

- As expected, the radiation caused radiation dermatitis with bright red eczematous edematous plaques located on the right leg. This was treated with hydrocortisone.
- During the acute phase no skin infection was present.
- Overall, the patient's treatment and healing process was unremarkable. Eight weeks following the last treatment the skin was healed with no evidence of crusting, scarring, or erythema.

Five Months Post Treatment

- Evidence of the SCC on the right distal pretibial region was non-existent.
- 'Fresh new' skin had replaced two very predominant skin cancers.
- The patient was pleased with the result and relieved to have avoided surgery.



Fig 1: SCC lesion on right distal pretibial region prior to treatment



Fig 2: Treatment area eight weeks after treatment

Case 2: Basal Cell Carcinoma on Scalp

Patient Age: 71 | **Sex:** Female | **Type:** Basal Cell Carcinoma (BCC), nodular type

Location: Left superior parietal scalp, treated with Electronic Brachytherapy

Lesion Size: 3 x 2.8 cm | **Treatment Margin:** 0.5 cm | **Field Size (Applicator):** 4.0 cm

Number of Treatments	Energy	Depth	Treatment Time	Dose per Treatment	Total Dose
10 (2 per week)	70 kV	0.5 mm	1.47 minutes	400 cGy	4000 cGy

Key Facts

- Prior to this diagnosis, the patient has a history of actinic keratosis and basal cell carcinoma.
- The patient had a complete consultation regarding all applicable modalities for the treatment of their skin cancer. It was determined that the patient would begin electronic brachytherapy (eBt) treatment for skin cancer based on a variety of factors including:
 - Tumor type, size and location
 - Relevant medical history
 - Local tissue factors
 - The functional status of the individual, including the ability to perform necessary postoperative wound care
 - The need for simultaneous treatments
 - Overall wound healing status



Fig 1: BCC lesion on scalp prior to radiation therapy treatment

Treatment Outcomes

- As expected, the radiation caused radiation dermatitis with bright red eczematous edematous plaques located on the scalp.
- During the acute phase no skin infection was present.
- Overall, the patient's treatment and healing process was unremarkable. Eight weeks following the last treatment the skin was healed with no evidence of crusting, scarring, or erythema.

Five Months Post Treatment

- Evidence of the BCC on the scalp was non-existent.
- 'Fresh new' skin had replaced predominant skin cancer
- The patient was delighted with the result and healing process.



Fig 2: Treatment area eight weeks after treatment