

# EFFECT OF SKIN REGENERATOR CREAM\* REVITALISATION DURING RADIOTHERAPY AFTER SURGICAL PROCEDURES AND CHEMOTHERAPY

Prof. Marko Erak MD, Mico Novakovic MD , Dejana Savic MD, Dragica Erak MD



Institute of Oncology Vojvodina, Sremska Kamenica, Serbia.  
Clinic for radiotherapy

\*Principelle Pelsan® cream

## INTRODUCTION

Radiation therapy after surgery is a standard and integral procedure for the treatment of malignant invasive breast and head and neck cancer.

The dose of radiation that be applied is limited to the acute toxic reaction and side effects.

Complications during radiation therapy are in direct correlation with the tumor dose, energy and dose fractionation regime.

For the monitoring of acute complications during radiation therapy, we used the scale rcommended by the associations of radiation oncologist.



## ROTG scale

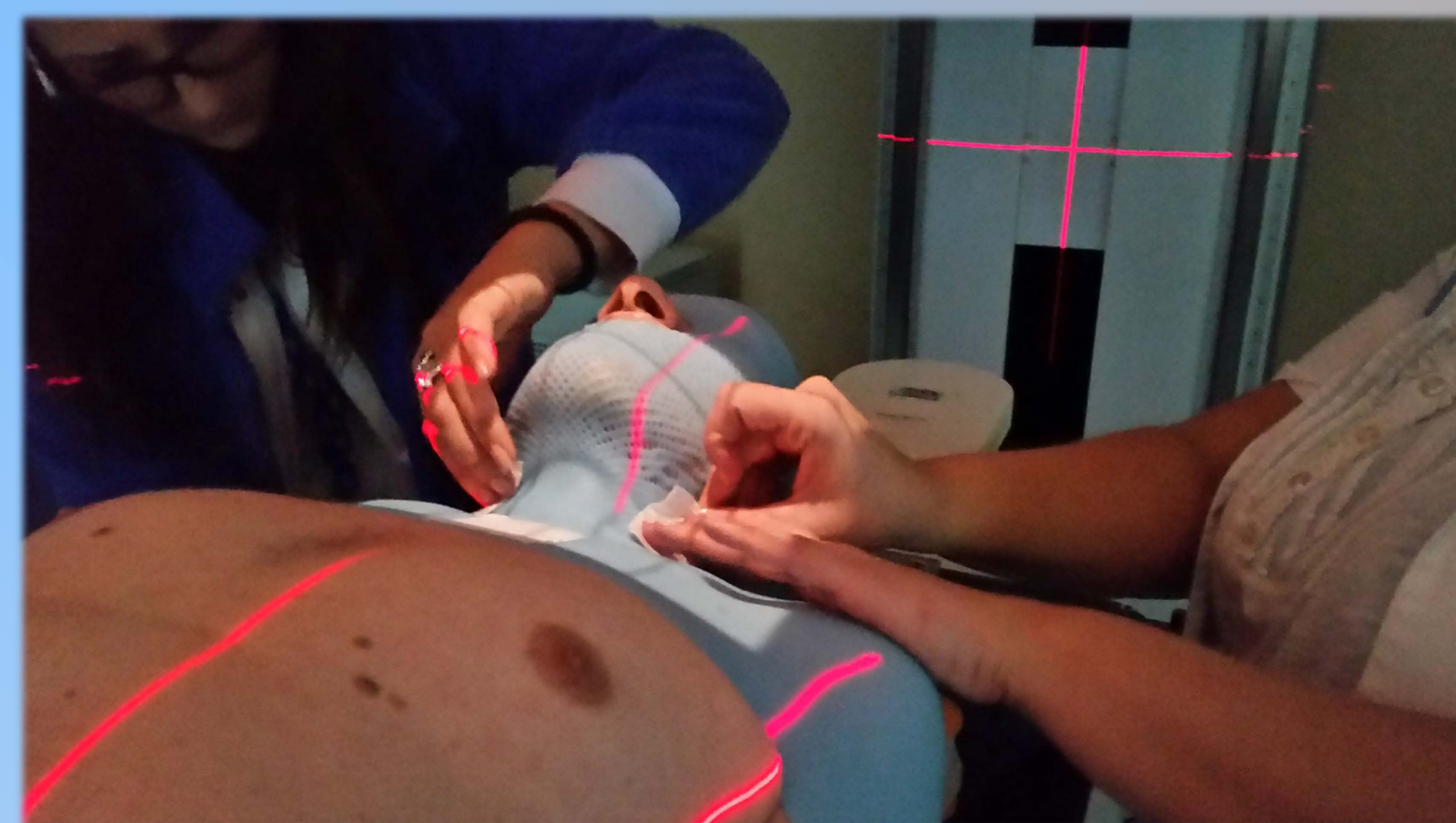
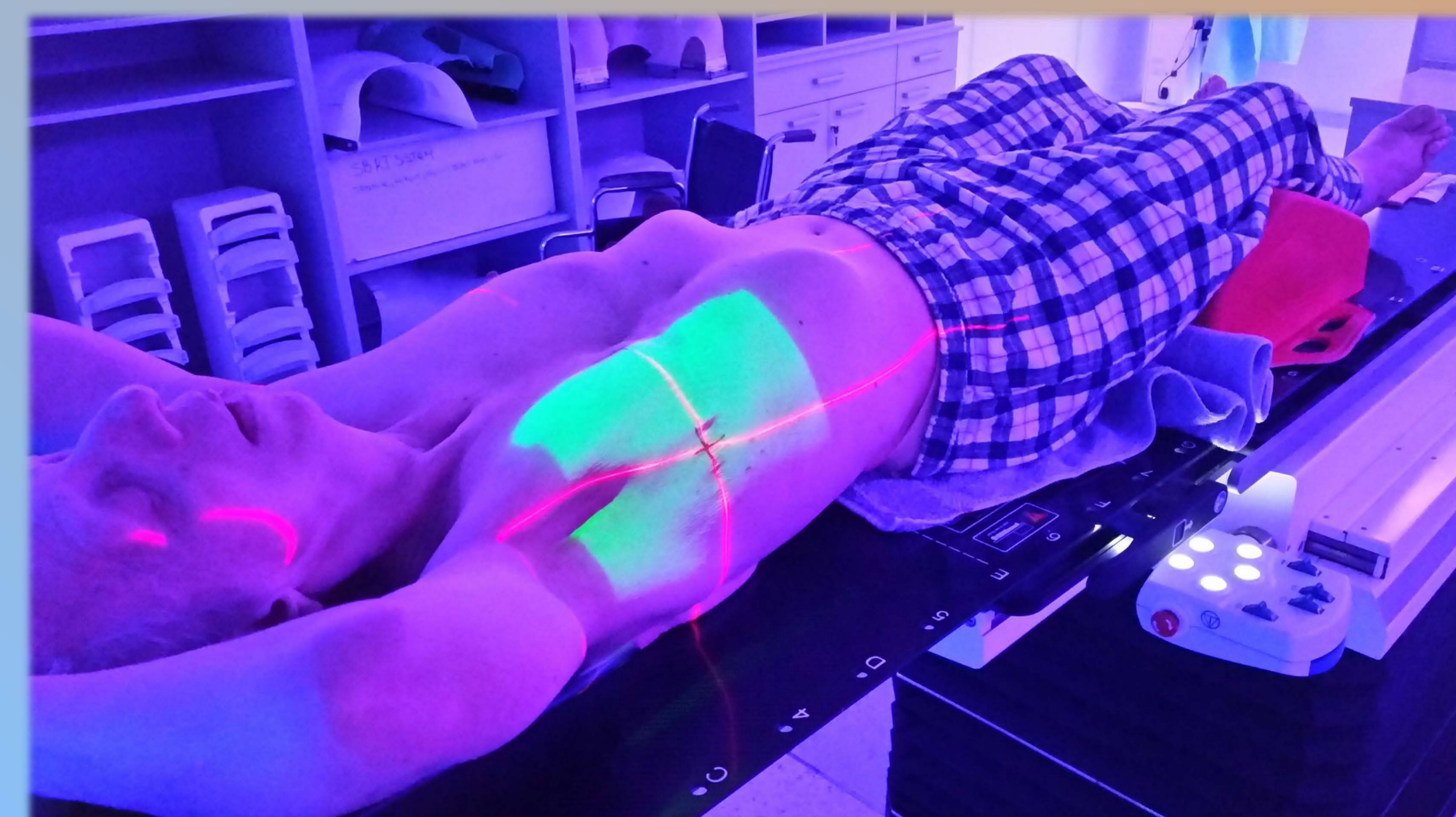
Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
	Light and/or painless erythema	Sensitive and /or intense erythema	Desquamation	Ulceration
No changes	Epilation	Desquamation	Widespread sweating	Haemorrhage
	Desquamation	Partial sweating	Marked edema	Necrosis
	Dryness	Moderate edema		

Common Toxicity Criteria version 2.0, DCTD, NCI, NIH, DHHS. Cancer therapy graduation programme. RTOG: Late radiation morbidity scoring system. Revised March 23 1998. Published April 30 1999) Version 4; adverse events.

## RESEARCH GOAL

Research goal was to determine the effect of skin regeneration cream\* which is made of combination of bisabol, jojoba oil, karité butter and willow extract in the revitalization of the epithelium of the skin during radiation therapy in patients with head and neck cancer and in radiotherapy of breast cancers.

\*Principelle Pelsan® cream



## MATERIAL AND METHODS

The research was conducted in a prospective study that included a total of 120 patients with postoperative radiotherapy between February and May 2015. During the fractionated radiation treatment, cream\* was applied to 60 patients (40 patients with breast cancer and 20 patients with tumors of head and neck).

Before the start of radiation treatment, an oncologist had verbal contact with each patient, introducing the topical use of the cream, method of application, and included a patient after obtaining written consent.

60 patients received treatment with cream\* prior to, during and after radiotherapy. Clinical effects in those patients were compared to 60 patients exposed to the same radiation therapy regime using a skin cream or lotion they customarily use at home.

Fractionated radiotherapy was applied by linear accelerators with photon energies 6 and 15 MV.

## RESULTS/DISCUSSION

In the examination group, 5 patients with breast cancer and 4 H&N cancer patients presented a G2 and toxicity. Radiation-induced skin reaction grade G3 was developed in 1 patient. Other patients had G1 toxicity or were without any radiation induced skin reaction.

In the control group 11 patients with breast cancer and 8 H&N cancer patients presented a G2 toxicity. Radiation-induced skin reaction grade G3 was developed in 4 patients.



Without complication after radiotherapy with skin regenerator cream\*



Complication after radiotherapy without skin regenerator cream\*

\*Principelle Pelsan® cream



25 fractions of RT, other cream was in use



After two weeks use of cream\* and boost RT 6 fractions



End of radiotherapy, with cream\*



Maculopapular rash, without cream\*

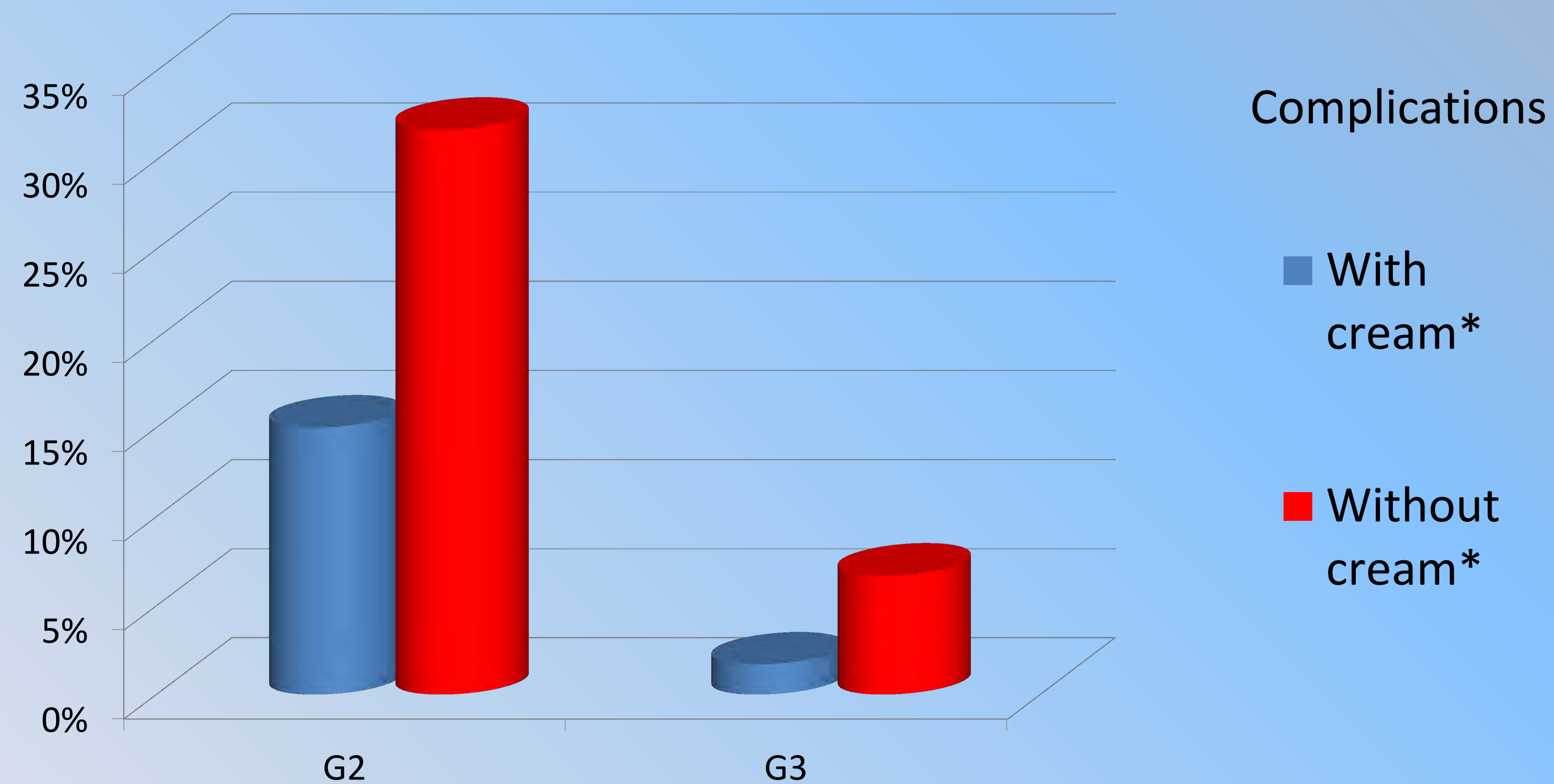


Ulcerations during RT , without cream\*

\*Principelle Pelsan® cream

## CONCLUSION

The results of the study with skin regeneration cream\* showed that the application of this preparation during a fractionated radiation regime plays a significant role in the prevention of higher radiation dermatitis grades (G2, G3). Cream\* provides normal skin moisture, hydrates the skin, reduces inflammation and in a high percentage reduce redness of the radiated region. Since cream\* does not contain pharmaceutical ingredients, toxicity of this product is not expected, there are no known interactions between cream\* and other medications. Application of cream\* is recommended during radiation therapy. The study confirms the protective role of cream\* used in radiotherapy of breast and H&N cancer.



### Reference:

1. Chan RJ, Webster J, Chung B, Marquart L, Muhtashimuddin Ahmed M, Garantzotis S. Prevention and treatment of acute radiation-induced skin reactions: a systematic review and meta-analysis of randomized controlled trials. BMC Cancer 2014, 14:53.
2. Di Franco et al. Preventing the acute skin side effects in patients treated with radiotherapy for breast cancer: the use of corneometry in order to evaluate the protective effect of moisturizing creams. Radiation Oncology 2013, 8:57.
3. Cammarota F, Muto P: Prevention of cutaneous damages induced by radiotherapy in breast cancer: an institutional experience. Tumori 2011, 97:732–736.
4. International Atomic Energy Agency. Radiation Oncology Physics: A Handbook for Teachers and Students, Vienna, 2005.
5. Cox JD, Stetz J, Pajak TF: Toxicity criteria of the Radiation Therapy Oncology Group (RTOG) and the European Organization for Research and Treatment of Cancer (EORTC). Int J Radiat Oncol Biol Phys 1995, 31(5):1341–6.
6. Noble-Adams R: Radiation-induced reactions 1: an examination of the phenomenon. Br J Nurs 1999, 8(17):1134–1140.
7. Naylor W, Mallett J: Management of acute radiotherapy induced skin reactions: a literature review. Eur J Oncol Nurs 2001, 5(4):221–223.
8. Glean E, Edwards S, Faithfull S, Meredith C, Richards C, Smith M, et al: Intervention for acute radiotherapy induced skin reactions in cancer patients: the development of a clinical guideline recommended for use by the college of radiographers. J Radiother Prac 2001, 2:75–84.
9. Bolderston A: Skin care recommendations during radiotherapy: a survey of Canadian practice. Can J Med Radiat Tech 2002, 34:3–11.
10. McQuestion M: Evidence-based skin care management in radiation therapy. Semin Oncol Nurs 2006, 22(3):163–173.

\*Principelle Pelsan® cream