



&

“

”

:

μ

:

.



## **ABSTRACT**

The present study is an attempt to show case skin problems faced by cancer patients during radiation therapy. Primary concern was the presentation of the problem of cancer in the skin and then some responses from an a esthetic stand point.

## 1

1.1 Τι είναι καρκίνος.....	4
1.2 Διάφορα είδη καρκίνων .....	6
1.3 Καρκίνος και δέρμα .....	12
1.4 Θεραπεία καρκίνου και δέρμα .....	17

## 2

2.1 Οι ασθενείς με καρκίνο βρίσκονται σε υψηλό κίνδυνο για προβλήματα του δέρματος.....	20
2.2 Θεμελιώδη γεγονότα για τραυματισμούς του δέρματος .....	22
2.3 Τα δερματικά προβλήματα .....	23

## 3

3.1 Αισθητική και κοσμητολογία σε συνεργασία με την ιατρική για την αντιμετώπιση των δερματικών προβλημάτων των καρκινοπαθών .....	34
3.2 Κρέμες για τις αντιδράσεις του δέρματος .....	36
3.3 Μηχανισμοί αντιμετώπισης των δερματικών αντιδράσεων .....	38
3.4 Η αρωματοθεραπεία μία εναλλακτική θεραπεία για καρκινοπαθείς .....	41
3.4 Το μόνιμο μακιγιάζ.....	42

2013. μ 2012

μ μ . μ μ μ μ ( 8 )  
μ μ μ μ .  
μ , , ,  
μ μ μ μ . μ μ μ μ



















































Xerosis      μ      ,      , μ  
μ ,      μ  
,      μ      μ      . Xerosis      μ  
μ      .      μ ,      μ      ,      μ  
μ      μ      μ      μ      μ      μ ,  
, μ μ      μ μ      ,  
μ      μ      50%      μ      μ  
,      μ      ,      /      (      , trichomegaly)  
μ      μ      . (42)

μ		
(      )      CTx	μ μ μ , μ , (      )	CTx
μ	μ , μ	CTx

	<p>μ μ ,</p> <p>μ μ</p> <p>μ μ</p> <p>μ μ - μ ,</p> <p>μ μ ,</p> <p>μ μ</p> <p>μ μ ,</p> <p>μ μ</p> <p>μ</p>	
<p>_____</p> <p>_____</p> <p>_____</p> <p>μ IgE</p>	<p>μ ,</p> <p>μ μ , 1</p> <p>μ</p> <p>(</p> <p>« μ »</p> <p>μ μ</p> <p>μ μ , μ μ</p> <p>,</p> <p>μ μ )</p>	<p>Platinum derivatives (cisplatin, carboplatin)</p>
	<p>μ</p> <p>μ μ</p>	<p>Methotrexate</p>
	<p>μ μ</p> <p>μ</p>	<p>Rituximab</p>
<p>μ μ</p>	<p>μ μ</p> <p>"</p> <p>"</p> <p>μμ</p>	<p>CTx agents</p>

	$\mu$ $\mu$ $\mu$ $\mu$ $\mu$ , $\mu$	
( $\mu$ - )	$\mu$ , $\mu$ ( $\mu$ , $\mu$ , , , )	Nitrogen mustard (mechlorethamine)
PSS ( ) ( $\mu$ )	CTx $\mu$ $\mu$ $\mu$ $\mu$	Numerous CTx drugs
<hr/> $\mu$ , <hr/> $\mu$ $\mu$ <hr/> $\mu$ $\mu$ $\mu$ , $\mu$	$\mu$ $\mu$ $\mu$ $\mu$	Various cytotoxic drugs (alkylating agents, tumor- directed antibiotics)
	$\mu$	Cyclophosphamid e
	$\mu$ ( $\mu$ ), $\mu$ $\mu$ , ( $\mu$ $\mu$ )	5-Fluorouracil (5- FU)

	, ,	
	μ	
μ , μ ,		Tegafur (5-FU derivative)
μ μ	μ	Busulfan (termed "busulfan tan") usulfan tan"), pegylated liposomal doxorubicin, hydroxyurea, methotrexate
		Daunorubicin
μ μ μ	μ μ μ	Cisplatin, hydroxyurea, bleomycin
μ μ μ μ	μ μ	Docetaxel, thiotepa, ifosfamide
μ	μ	Daunorubicin
<u>μ</u> μ μ	μ μ	Tyrosine kinase signal transduction inhibitors (occurs with 50% of patients of higher doses of imatinib)
μ μ	μ μ μ , μ μ , μ	EGFR (epidermal growth factor receptor) inhibitors (cetuximab, efitinib)

" μ μ - "	μ	μ μ
<u>μμ Beau</u>	μμ	μ
		Paclitaxel, docetaxel, cyclophosphamide, doxorubicin, 5-FU, hydroxyurea, combination of vinblastine+bleomycin
μ	μ μ μ	EGFR (epidermal growth factor receptor) inhibitors (cetuximab, gefitinib), taxanes (docetaxel)
1) - 2) 3)	1) μ μ μ μ μ μ 2) μ μ μ 3) μ	μ μ μ



	<p>μ</p> <p>μ μ ,</p> <p>μ ,</p> <p>μ μ -</p>	
_____	/	
μ	<p>μ</p> <p>μ</p> <p>μ</p> <p>( μ )</p>	<p>Tamoxiphen,</p> <p>dactinomycin</p> <p>(usually</p> <p>occurs with first</p> <p>dose of CTx or</p> <p>with</p> <p>higher doses,</p> <p>usually occurs</p> <p>with IV</p> <p>CTx rather than</p> <p>oral)</p>
μ	<p>μ</p> <p>μ CTx</p> <p>μ μ ,</p> <p>μ ,</p> <p>μ</p>	μ CTx
μ	<p>μ</p> <p>μ</p> <p>μ</p> <p>μ , ,</p> <p>μ , μ</p>	μ μ
μ	<p>μ</p> <p>μ</p> <p>μ</p> <p>μ , ,</p> <p>μ μ</p>	μ μ



(2)



: μ -  
μ : μ μ  
C: , μ



μ :  
(pulpitissicca)

μ μ



μ : : και μ μ μ

(43)

### 3.1

$\mu$

$\mu$

$\mu$

$\mu$

$\mu$

$\mu$

$\mu$

( )  $\mu$

$\mu$

(44)

· ,  $\mu$

$\mu$

$\mu$

$\mu$

·

(45,46)

,

$\mu$

,

$\mu$

$\mu$

$\mu$

$\mu$

,

·

,

$\mu$

,

$\mu$

$\mu$

·

$\mu$

$\mu$  ,  $\mu$  ,  $\mu$  ,  $\mu$  .(47)

$\mu$

$\mu$

,

$\mu$

$\mu$

$\mu\mu$

$\mu$

$\mu$

$\mu$

·

,

$\mu$

$\mu$

,

$\mu$

·

$\mu$

$\mu$

$\mu$

·

,

$\mu$

$\mu$

$\mu$

$\mu$   $\mu$   $\mu$  .(48)

$\mu$

$\mu$

·

$\mu$

$\mu\mu$

,

$\mu$

,

$\mu$

$\mu$

$\mu$

·

,

$\mu$

,

$\mu$

$\mu$

,

$\mu$

$\mu$

·

·

$\mu$

$\mu$

$\mu$

$\mu$

$\mu$













25.

μ  
 μ , μ : μ μ , peeling, μ μ , peeling μ  
 , μ laser , μ - ,  
 μ μ μ μ μ μ  
 μ . μ μ μ μ μ μ  
 Hot Stones  
 μ μ : μ μ μ μ μ μ , μ  
 μ μ μ μ , μ ,  
 μ .

26.

μ μ μ  
 μ : μ μ  
 , μ , μ  
 , relaxing μ μ peeling, μ peeling  
 μ μ , μ ,  
 , μ , μ parabens.  
 μ μ

27.

μ μ μ , μ μ μ

28.

3 μ μ μ μ μ μ .

29.

μ μ μ μ μ μ make up μ μ μ

30.

μ μ - μ  
 μ μ μ  
 Reiki, μ , μ : relaxing μ , μ ,  
 , μ , μ , μ ,  
 , oga, T'ai Chi, Qi gong, Shiatsu,  
 , μ , μ  
 , μ μ μ μ , μ ,  
 , . (57)







$\mu$                      $\mu$                      $\mu$                      $\mu$   
 $\mu$                      $\mu$                      $\mu$                      $\mu$   
 ....  
 ....

$\mu$                      $\mu$                      $\mu$                      $\mu$   
 $\mu$                      $\mu$                      $\mu$                      $\mu$   
 ....  
 ....

1. / National cancer Institute/ Mackmillan Cancer support/ American cancer Society . μ :bestrong.org.gr 10/12/2011
2. μ :http://www.mayoclinic.org/diseases-treatment-c.html
3. μ /Creative Commons Attribution-ShareAlikeLicense
4. μ /National institutes of health/American academy of dermatology μ : medlabnews.gr
5. PenyRobinsMD, DeborahS. SarnoffMD, DavidLeflMD/ μ μ μ / μ μ :[www.skincancer.org](http://www.skincancer.org) 2010
6. American cancer society/ radiation therapy/what is,what it helps/ μ : [www.cancer.org](http://www.cancer.org) 20/6/2011
7. . , . , . , μμ . , . , . / μ μ μ 2011 10(2) : 406-4016
8. Cosselin-Acomb TK/Role of the radiation oncology nurse/ semoncolnurs 2006 : 22(4): 198-202
9. μ ./ μ / μ 2009 μ μ
10. Comporeale J. basics of radiation treatment/clin J. oncol/nurs 2008 12:193-195
11. ./ 2007
12. μ - / . / , / 2007
13. Sternemann M, Wiegel T, Geilen CC, Orfanos CE ,Hinkelbein W (eds)/ controversies in the treatment of skin neoplasias /front radiattheroncol/baselkargev 2006 vol 39 p 102-119
14. Lacouture ME./ The growing importance of skin toxicity in EGFR inhibitor therapy/Oncology (Williston Park) 2009; 23: 194, 196



15. Potthoff K, Hofheinz R, Hassel JC/Interdisciplinary management of EGFRinhibitor-induced skin reactions: a German expert opinion. *Ann Oncol* 2011;22:524–535
16. Lacouture ME, Anadkat MJ, Bensadoun RJ et al./ Clinical practice guidelines for the prevention and treatment of EGFR inhibitor-associated dermatologic toxicities/ *Support Care Cancer* 2011; 19: 1079–1095
17. Johansson S, Svensson H, Denenkamp J/Dose response and latency for radiation induced fibrosis, edema and neuropathy in breast cancer patients. *Int J Radiat Oncol Biol Phys* 2002, 52:1207-1219
18. Van de Steene J, Vinh Hung V, Cutuli B, Storme G/Adjuvant radiotherapy for breast cancer: effects of longer follow-up/*Radiother Oncol* 2004, 72:35-43
19. Burnet NG, Johansen J, Turesson I, Nyman J, Peacock JH/Describing patients' normal tissue reactions: concerning the possibility of individualising radiotherapy dose prescriptions based on potential predictive assays of normal tissue radiosensitivity/Steering Committee of the BioMed 2 European Union Concerted Action Programme on the Development of Predictive Tests of Normal Tissue Response to Radiation Therapy/*Int J Cancer* 1998, 79:606-613
20. zation models in treatment planning and delivery/*Int J Radiat Oncol Biol Phys* 2001, 49:327-337
21. Guirado D, Ruiz de Almodóvar JM/Prediction of normal tissue response and individualization of doses in radiotherapy/*Phys Med Biol* 2003, 48:3213-3233
22. Turesson I, Nyman J, Holmberg E, Oden A/Prognostic factors for acute and late skin reactions in radiotherapy patients/*Int J Radiat Oncol Biol Phys* 1996, 36:1065-1075
23. Peacock JH, Ashton A, Bliss J, Bush C, Eady J, Jackson C, Owen R, Regan J, Yarnold J/Cellular radiosensitivity and complication risk after curative radiotherapy/*Radiother Oncol* 2000, 55:173-178.
24. Nahass GT, Cornelius L. Fluoroscopy-induced radiodermatitis after transjugular intrahepatic portosystemic shunt/*Am J Gastroenterol* 1998;93:1546–1549
25. Wagner LK, McNesse MD, Marx MV, Siegel EL/Severe skin reactions from interventional fluoroscopy/case report and review of literature. *Radiology* 1999;213:773–776

26. Koenig T, Mettler FA, Wagner LK/Skin injuries from fluoroscopically guided procedures/ 2. Review of 73 cases and recommendations for minimizing dose delivered to patient/*AJR* 2001;177:13–20
27. Daniel J. /The x-rays/ (letter) *Science* 189:63:562
28. Mettler FA, Upton AC/*Medical effects of ionizing radiation*, 2nd ed. Philadelphia: Saunders/1995:214–220, 311–314
29. Hopewell JW/ The skin: its structure and response to ionizing radiation/*Int J Radiat Biol*1990;57:751–773
30. Perez CA, Brady LW Principles and practice of radiation oncology, 3rd edn. Lippincott-Raven, Philadelphia/1998 PA, p 11
31. Barkham AM Radiotherapy skin reactions and treatments. Prof Nurse 8:732–736 [PubMed](#)/ 1993
32. Bolderston A Skin care recommendations during radiotherapy: a survey of Canadian practice. *Can J Med Radiat Technol* 34:3–11 [CrossRef](#)/ 2002
33. Johansson S, Svensson H, Denenkamp J/ Timescale of evolution of late radiation injury after postoperative radiotherapy of breast cancer patients/*Int J Radiat Oncol Biol Phys*2000;48:745-750
34. Gatti RA/ The inherited basis of human radiosensitivity/*Acta Oncol*2001;40:702-711.
35. Seghaert S, Van Cutsem E. Clinical signs, pathophysiology and management of skin toxicity during therapy with epidermal growth factor receptor inhibitors/*Ann Oncol* 2005 16:1425–1433
36. Lacouture ME. Mechanisms of cutaneous toxicities to EGFR inhibitors/*Nat Rev Cancer* 2006 6:803–812
37. Duffour J, The´zenas S, Dereure O et al./ Interobserver agreement between dermatologists and oncologists in assessing dermatological toxicities in patients with metastatic colorectal cancer treated by cetuximab-based chemotherapies: a pilot comparative study/*Eur J Cancer* 2010/ Published April 21, 2010
38. Brook RH, Gompert DC. The RAND/UCLA Appropriateness Method/“Clinical practice guideline development/methodology perspectives/Rockville (MD): Public Health Service, AHCPR, 1994
39. Schwartz G, Dutcher JP, Vogelzang NJ et al. Phase 2 clinical trial evaluating the safety and effectiveness of ABX-EGF in renal cell cancer (RCC)/*Proc Am Soc Clin Oncol* 2002 21:abstract 91

- 40.**Herbst RS, Giaccone G, Schiller JH et al. Gefitinib in combination with paclitaxel and carboplatin in advanced non-small-cell lung cancer: a phase III trial—INTACT 2. *J Clin Oncol* 2004 22:785–794
- 41.**Busam KJ, Capodieci P, Motzer R et al. Cutaneous side-effects in cancer patients treated with the anti-epidermal growth factor receptor antibody C225/ *Br J Dermatol* 2001 144:1169 –1176
- 42.**Herbst RS, LoRusso PM, Purdom M et al. / Dermatologic side effects associated with gefitinib therapy: clinical experience and management/ *Clin Lung Cancer* 2003 4:366 –369
- 43.**A.F.S. Galimont-Collen, L.E. Vos, A.P.M. Lavrijsen, J. Ouwerkerk, H. Gelderblom/ *European Journal of Cancer*/ Volume 43, Issue 5/March 2007/Pages 845–851
- 44.**Lacouture M, West D, Tigue C, Knox K, Bennett C/ Cutaneous toxicities of targeted cancer therapies/ *Community Oncology* /5(7):413–414 2008
- 45.**Hackbarth M, Haas N, Fotopoulou C, Lichtenegger W, Sehouli J/ Chemotherapy-induced dermatological toxicity: frequencies and impact on quality of life in women's cancers/ Results of a prospective study/ *Support Care Cancer* 16(3):267–273 2008
- 46.**O'Keeffe P, Parrilli M, Lacouture M Toxicity of targeted therapy/ focus on rash and other dermatologic side effects *Oncol Nurses Ed* 20:1–6 2006
- 47.**Gandhi M, Oishi K, Zubal B/ Unanticipated toxicities from anticancer therapies: survivors' perspectives. *Support Care in Cancer*
- 48.**Lynch T, Kim E, Eaby B, Garey J, West D, Lacouture M / Epidermal growth factor receptor inhibitor-associated cutaneous toxicities: an evolving paradigm in clinical management/ *Oncologist* 12(5):610–621 2007
- 49.**McQuestion M Evidence-based skin care management in radiation therapy. *Semin Oncol Nurs* 22(3):163–173 2006
- 50.**Lokkevik E, Skovlund E, Reitan JB et al (1996) Skin treatment with bepanthen cream versus no cream during radiotherapy/ *Acta Oncol* /35:1021-1026
- 51.**Fenig E, Brenner B, Katz A et al (2001) Topical biafine and lipiderm for the prevention of radiation dermatitis: a randomized prospective trial/ *Oncol Rep* 8:305–309

**52.**Halperin EC, Gaspar L, George S et al (1993) A double-blind, randomized, prospective trial to evaluate topical vitamin C solution for the prevention of radiation dermatitis. *Int J RadiatOncolBiolPhys* 26:413–416

**53.**Liguori V, Guillemin C, Pesce GF et al (1997) Double-blind, randomized clinical study comparing hyaluronic acid cream to placebo in patients treated with radiotherapy. *RadiotherOncol* 42:155–161

**54.**Williams MS, Burk M, Loprinzi CL et al (1996) Phase III double-blind evaluation of an aloe vera gel as a prophylactic agent for radiation-induced skin toxicity. *Int J RadiatOncolBiolPhys* 36:345–349

**55.**Maiche AG, Grohn P, Maki-Hokkonen H (1991) Effect of chamomile cream and almond ointment on acute radiation skin reaction. *ActaOncol* 30:395–396

**56.**Fenig E, Brenner B, Katz A et al (2001) Topical biafine and lipiderm for the prevention of radiation dermatitis: a randomized prospective trial. *OncolRep* 8:305–309

**57.** μ . Dpl Cidesco/

[:http://www.aesthetics.gr/index.php?option=com\\_content&view=article&id=2240%3A-a-a-a-&catid=185&Itemid=183](http://www.aesthetics.gr/index.php?option=com_content&view=article&id=2240%3A-a-a-a-&catid=185&Itemid=183)

**58.**Kuriyama H, Watanabe S, Nakaya T, Kita M, Nishida N, Masaki D, et al. Immunological and psychological benefits of aromatherapy massage/*Evidence-based Complement Alternat Med* 2005 2:179–84

**59.**Okamoto A, Kuriyama H, Watanabe S, Aihara Y, Tadai T, Imanishi J, et al. The effect of aromatherapy massage on mild depression: a pilot study/*PsychiatClinNeuros*2005 59:363

**60.**Fellowes D, Barnes K, Wilkinson S/ Aromatherapy and massage for symptom relief in patients with cancer/ *The Cochrane Database of Systematic Reviews* 2004 Issue 3 Art. No: CD002287

**61.** Christa De Cuyper, MD /*Clinics in Dermatology/* Volume 26, Issue 1/ January–February 2008/ Pages 30–34