

## PATHWAYS ADDITIONAL REFERENCES NOT IN MAGAZINE: Summer 2013

### Research Advances

### Radiation Therapy and the Lymphatic System

By Amy Baker, John Semple and Miles Johnston

#### References

1. Ozaslan, C., and Kuru, B. (2004) Lymphedema after treatment of breast cancer, *Am J Surg* 187, 69-72.
2. Bland, K. (1999) Quality of life of breast cancer patients with lymphedema., *American Journal of Surgery*, 188.
3. Kwan, W., Jackson, J., Weir, L. M., Dingee, C., McGregor, G., and Olivotto, I. A. (2002) Chronic arm morbidity after curative breast cancer treatment: prevalence and impact on quality of life, *J Clin Oncol* 20, 4242-4248.
4. Darby, S., McGale, P., Correa, C., Taylor, C., Arriagada, R., Clarke, M., Cutter, D., Davies, C., Ewertz, M., Godwin, J., Gray, R., Pierce, L., Whelan, T., Wang, Y., and Peto, R. (2011) Effect of radiotherapy after breast-conserving surgery on 10-year recurrence and 15-year breast cancer death: meta-analysis of individual patient data for 10,801 women in 17 randomised trials, *Lancet* 378, 1707-1716.
5. Dominick, S. A., Madlensky, L., Natarajan, L., and Pierce, J. P. (2013) Risk factors associated with breast cancer-related lymphedema in the WHEL Study, *J Cancer Surviv* 7, 115-123.
6. Arriagada, R., Mouriessse, H., Rezvani, A., Sarrazin, D., Clark, R. M., DeBoer, G., and Bush, R. S. (1993) Radiotherapy alone in breast cancer. Analysis of tumor and lymph node radiation doses and treatment-related complications. The experience of the Gustave-Roussy Institute and the Princess Margaret Hospital, *Radiother Oncol* 27, 1-6.
7. (2008) Adjunctive radiation therapy for invasive breast cancers in *Clinical Practise Guidelines* Alberta Health Services Alberta.
8. Engeset, A. (1964) Irradiation of Lymph Nodes and Vessels. Experiments in Rats, with Reference to Cancer Therapy, *Acta Radiol Diagn (Stockh)*, SUPPL 229:221+.
9. Sherman, J. O., and O'Brien, P. H. (1967) Effect of ionizing irradiation on normal lymphatic vessels and lymph nodes, *Cancer* 20, 1851-1858.
10. Avraham, T., Yan, A., Zampell, J. C., Daluvoy, S. V., Haimovitz-Friedman, A., Cordeiro, A. P., and Mehrara, B. J. (2010) Radiation therapy causes loss of dermal lymphatic vessels and interferes with lymphatic function by TGF- $\beta$ 1 mediated tissue fibrosis, *Am J Physiol Cell Physiol*.
11. Jackowski, S., Janusch, M., Fiedler, E., Marsch, W. C., Ulbrich, E. J., Gaisbauer, G., Dunst, J., Kerjaschki, D., and Helmbold, P. (2007) Radiogenic lymphangiogenesis in the skin, *Am J Pathol* 171, 338-348.
12. Gillette, E. L., Maurer, G. D., and Severin, G. A. (1975) Endothelial repair of radiation damage following beta irradiation, *Radiology* 116, 175-177.

13. Martin, D. F., and Fischer, J. J. (1984) Radiation sensitivity of cultured rabbit aortic endothelial cells, *Int J Radiat Oncol Biol Phys* 10, 1903-1906.
14. Reinhold, H. S., and Buisman, G. H. (1975) Repair of radiation damage to capillary endothelium, *Br J Radiol* 48, 727-731.
15. Reinhold, H. S., and Buisman, G. H. (1973) Radiosensitivity of capillary endothelium, *Br J Radiol* 46, 54-57.
16. Yamaura, H., Yamada, K., and Matsuzawa, T. (1976) Radiation effect on the proliferating capillaries in rat transparent chambers, *Int J Radiat Biol Relat Stud Phys Chem Med* 30, 179-187.
17. Raicu, M., Vral, A., Thierens, H., and De Ridder, L. (1993) Radiation damage to endothelial cells in vitro, as judged by the micronucleus assay, *Mutagenesis* 8, 335-339.
18. Sung, H. K., Morisada, T., Cho, C. H., Oike, Y., Lee, J., Sung, E. K., Chung, J. H., Suda, T., and Koh, G. Y. (2006) Intestinal and peri-tumoral lymphatic endothelial cells are resistant to radiation-induced apoptosis, *Biochem Biophys Res Commun* 345, 545-551.
19. Garcia-Barros, M., Paris, F., Cordon-Cardo, C., Lyden, D., Rafii, S., Haimovitz-Friedman, A., Fuks, Z., and Kolesnick, R. (2003) Tumor response to radiotherapy regulated by endothelial cell apoptosis, *Science* 300, 1155-1159.
20. Mortimer, P., Simmons, R. H., Rezvani, M., Robbins, M. E. C., Ryan, T. J., Hopewell, J. W. . (1991) Time-related changes in lymphatic clearance in pig skin after a single dose of 18 Gy of X rays., *The British Journal of Radiology* 64, 1140-1146.
21. Aukland, K., and Reed, R. K. (1993) Interstitial-lymphatic mechanisms in the control of extracellular fluid volume, *Physiol Rev* 73, 1-78.
22. Anderson, R. E., and Williams, W. L. (1977) Radiosensitivity of T and B lymphocytes. V. Effects of whole-body irradiation on numbers of recirculating T cells and sensitization to primary skin grafts in mice, *Am J Pathol* 89, 367-378.
23. Hale, M. L., and McCarthy, K. F. (1984) Effect of sublethal ionizing radiation on rat Peyer's patch lymphocytes, *Radiat Res* 99, 151-164.
24. Hale, M. L., Briggs, R., and McCarthy, K. F. (1991) Interaction of lymphocytes and high endothelial venules in irradiated lymph nodes, *Radiat Res* 125, 129-133.
25. Clavin, N. W., Avraham, T., Fernandez, J., Daluvoy, S. V., Soares, M. A., Chaudhry, A., and Mehrara, B. J. (2008) TGF-beta1 is a negative regulator of lymphatic regeneration during wound repair, *Am J Physiol Heart Circ Physiol* 295, H2113-2127.
26. van Meeteren, L. A., and ten Dijke, P. (2012) Regulation of endothelial cell plasticity by TGF-beta, *Cell Tissue Res* 347, 177-186.
27. Westbury, C. B., and Yarnold, J. R. (2012) Radiation fibrosis -- current clinical and therapeutic perspectives, *Clin Oncol (R Coll Radiol)* 24, 657-672.
28. Leask, A., and Abraham, D. J. (2004) TGF-beta signaling and the fibrotic response, *FASEB J* 18, 816-827.
29. Bouquet, F., Pal, A., Pilonis, K. A., Demaria, S., Hann, B., Akhurst, R. J., Babb, J. S., Lonning, S. M., DeWyngaert, J. K., Formenti, S. C., and Barcellos-Hoff, M. H. (2011) TGFbeta1 inhibition increases the

radiosensitivity of breast cancer cells in vitro and promotes tumor control by radiation in vivo, *Clin Cancer Res* 17, 6754-6765.

30. Daley, S. K., Bernas, M. J., Stea, B. D., Bracamonte, F., McKenna, M., Stejskal, A., Hirleman, E. D., and Witte, M. H. (2010) Radioprotection from radiation-induced lymphedema without tumor protection, *Lymphology* 43, 48-58.
31. Rigotti, G., Marchi, A., Galie, M., Baroni, G., Benati, D., Krampera, M., Pasini, A., and Sbarbati, A. (2007) Clinical treatment of radiotherapy tissue damage by lipoaspirate transplant: a healing process mediated by adipose-derived adult stem cells, *Plast Reconstr Surg* 119, 1409-1422; discussion 1423-1404.
32. Salgarello, M., Visconti, G., and Farallo, E. (2010) Autologous fat graft in radiated tissue prior to alloplastic reconstruction of the breast: report of two cases, *Aesthetic Plast Surg* 34, 5-10.
33. Yan, A., Avraham, T., Zampell, J.C., Haviv, Y.S., Weitman, E., Mehrara, B.J. (2011) Adipose-derived stem cells promote lymphangiogenesis in response to VEGF-C stimulation or TGF- $\beta$ 1 inhibition, *Future Oncol* 7,1457-73.

### Clinical Perspective

## Protect Your Quality of Life from Lymphedema

By Elizabeth McMahon

### References

1. Living Well With Lymphedema – Ann Ehrlich, Alma Vinje-Harrewijn, and Elizabeth McMahon, Ph.D., Lymph Notes, 2005.
2. Overcoming the Emotional Challenges of Lymphedema – Elizabeth McMahon, Ph.D., Lymph Notes, 2005.
3. Thanks!: How The New Science Of Gratitude Can Make You Happier – Robert Emmons, Ph.D., Houghton Mifflin, 2007.