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Radiotherapy for Non-Malignant Disorders

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To my beloved family

My wife Marion
My daughter Victoria
And my four sons
Sebastian, Johannes,
Andreas and Emanuel

Throw your thoughts
Beyond horizons.
Take your heart
In both your hands.
And your feet
Will easy follow
Every path
Throughout this world

Camille Flammarion's Woodcut, Paris 1888 (L'atmosphère: météorogie populaire)
Non-malignant, or “benign”, diseases can be successfully treated using ionizing radiation technologies. It was first proposed in 1898 by Sokoloff, who reported the analgesic effects of radiotherapy for painful rheumatoid arthritis. Since then, the use of these techniques for painful muscle-skeletal diseases has gained acceptance particularly in Europe but is still carried out actively in the United States. Non-malignant diseases that are amenable to radiotherapy can be classified as inflammatory, degenerative, hyperproliferative, functional, or other disorders. However, the topographic and morphologic considerations are more relevant. Even though radiation therapy for “benign” diseases has not been pursued actively since the 1950s, more recent interest has dictated that it can be a very effective treatment modality. The use of radiotherapy can be justified for invasive and aggressive growth such as that seen with desmoids, for cosmetic disfigurations and functional loss as seen with keloids or endocrine orbitopathy, or for life-threatening complications such as hepatic hemangiomas or juvenile angiofibromas that occur in children or adolescents. Many of the non-malignant diseases can have a major and lasting effect on quality of life by causing pain or other serious symptoms, particularly when other methods of treatment are unavailable, have failed, or may induce more side effects. It is not generally the first choice of therapy in these non-malignant diseases, but it is acceptable as defined.

The book edited by Seegenschmiedt et al. deals with the circumstances, indications, and applications of radiation therapy for non-malignant diseases, particularly when there is a lack of any treatment that leads to control of the process, failure on prior treatment modalities, to avoid more invasive therapies, and the recognition that radiobiological targets and mechanisms exist which suggest a beneficial positive effect of ionizing radiation.

This book represents a significant and important statement on the application of radiation therapy in non-malignant diseases and is the only composite and complete statement as to the circumstances and efficacy of such treatment. It would be of very great interest to practitioners and all medical specialists, particularly radiation oncologists, orthopedists, surgeons and ophthalmologists.

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