Red Journal’s May issue focuses on the vital role of radiation therapy in modern lymphoma treatment

Fairfax, Va., April 16, 2015—The “Radiation and the Modern Management of Lymphoma” issue (May 1, 2015) of the International Journal of Radiation Oncology • Biology • Physics (Red Journal), the official scientific journal of the American Society for Radiation Oncology (ASTRO), is focused on the integral role of radiation therapy in current lymphoma treatment. May 2015 marks 50 years since the first multidisciplinary lymphoma conference, “La Radiotherapie de la Maladie de Hodgkin,” was held in Paris in 1965, which led to a more comprehensive understanding of the cancer’s pathology, staging and treatment.

In the first half of the 20th century, radiation therapy was primarily used to palliate patients’ symptoms because of technical limitations, and it was generally believed that the disease was incurable. During the 1965 Paris conference, the work of individuals such as M. Vera Peters, MD, Henry Kaplan, MD, and Maurice Tubiana, MD, PhD, demonstrated that cure was indeed possible using radiation therapy. A classification system was agreed upon using observations about the patterns of spread and new forms of imaging such as the lymphangiogram. This system distinguished between those with localized disease who could be managed by radiation therapy to the affected nodes and the neighboring nodal regions where the disease may also be hiding, and the more advanced disease that would ultimately need chemotherapy for cure. In the early 1960s, chemotherapy regimens, such as MOPP (mechlorethamine, vincristine, procarbazine and
prednisone), were used for curative intent in patients with more advanced stage disease. During the next several decades, the integration of radiation therapy with novel chemotherapy was progressively evaluated in a series of trials.

Twenty-six studies and articles are included in this issue of the Red Journal, and they detail the complex role of radiation therapy, including treatment design and delivery, combination therapies and modern imaging, which have led to improved outcomes for patients with Hodgkin lymphoma and patients with non-Hodgkin lymphoma.

Two guidelines from the International Lymphoma Radiation Oncology Group (ILROG) analyze field and dose guidelines. Joachim Yahalom, MD, FASTRO, et al, address the technical challenges of simulation, volume definition and treatment planning for commonly involved organs in patients with extra-nodal lymphomas, which account for approximately one-third of all non-Hodgkin lymphomas. Lena Specht, MD, PhD, et al, outline recommendations on the delivery of radiation therapy in the treatment of primary cutaneous lymphomas, which require a modified approach compared to treatment for nodal or systemic lymphomas.

Two studies focus on the use of rituximab, which is used in diseases with an excessive amount of B cells including lymphoma. Susan M. Hiniker, MD, et al, explore the use of post-treatment surveillance studies for patients with limited-stage diffuse large B-cell lymphoma who were treated with chemotherapy with or without rituximab, radiation therapy or combined modality therapy. The authors found that the use of PET scans for post-treatment surveillance was not associated with a survival advantage and suggest limited use of post-treatment surveillance in this patient population.

A study by Naresh Jegadeesh, MD, et al, identifies predictors of local recurrence to determine which patients with stage III and stage IV diffuse large B-cell lymphoma treated with rituximab alone may benefit from the addition of consolidative radiation therapy. The authors conclude that patients with stage III disease or with disease ≥5 cm, and patients with <5 cm disease and SUV-max ≥15 have a higher risk of local recurrence and may benefit from consolidative radiation therapy following chemoimmunotherapy.
In another study, Jeanny Kwon, MD, et al, explore the role of involved-lesion radiation therapy after R-CHOP chemotherapy (rituximab, cyclophosphamide, doxorubicin, vincristine and prednisone) for patients with limited stage diffuse large B-cell lymphoma. Involved-lesion radiation therapy may reduce toxicity through the use of smaller radiation therapy fields than involved-field radiation therapy. The authors analyzed the rates of progression-free survival and overall survival in patients treated with R-CHOP therapy alone compared to patients treated with R-CHOP followed by involved-lesion radiation therapy. The study’s results suggest that adding involved-lesion radiation therapy after R-CHOP therapy improves both progression-free and overall survival.

Chelsea C. Pinnix, MD, PhD, et al, evaluate predictors of radiation pneumonitis (radiation-induced lung disease) in patients with Hodgkin and non-Hodgkin lymphoma, who are treated with intensity modulated radiation therapy (IMRT) to the thoracic region. The results demonstrate that patients who received salvage chemotherapy for relapsed or refractory disease in addition to IMRT had the highest risk of radiation pneumonitis. Low doses of radiation to large lung volumes was also a predictor of radiation pneumonitis.

Additional studies and editorials included in this Red Journal issue are:

- Joan Reinhardt-Reiss, MS, and Sarah S. Donaldson, MD, FASTRO – Editorial: “Homage to M. Vera Peters, MD”
- Stephanie Terezakis, MD – Editorial: “Dorothy Reed: Expressions of a Pioneer in Hodgkin’s Disease”
• Jan Kriz, MD, et al – “Relapse analysis of irradiated patients within the HD15 trial of the German Hodgkin Study Group”

• Jordan A. Torok, MD, et al – “Low-Dose Consolidation Radiation Therapy for Early-Stage Unfavorable Hodgkin Lymphoma”

• Kavita V. Dharmarajan, MD, MSc, et al – “Patterns of Relapse From a Phase III Study of Response-Based Therapy for Intermediate-Risk Hodgkin Lymphoma (AHOD0031): A Report From the Children’s Oncology Group”

• Martin King, MD, PhD, et al – “Management of Nodular Lymphocyte Predominant Hodgkin Lymphoma (NLPHL) in the Modern Era”


• Francisco Mestre, MD, et al – “Radiation Therapy Overcomes Adverse Prognostic Role of Cyclooxygenase-2 Expression on Reed-Sternberg Cells in Early Hodgkin Lymphoma”

• Chelsea C. Pinnix, MD, PhD, et al – “Single Institutional Experience in the Treatment of Primary Mediastinal B Cell Lymphoma Treated with Immunochemotherapy in the Setting of Response Assessment by \(^{18}\)Fluorodeoxyglucose Positron Emission Tomography”

• Randa Tao, MD, et al – “Benefit of Consolidative Radiation Therapy for Primary Bone Diffuse Large B-cell Lymphoma”

• Sewit Teckie, MD, et al – “Long-Term Outcomes and Patterns of Relapse of Early-Stage Extra-nodal Marginal Zone Lymphoma Treated with Radiotherapy with Curative Intent”

• Maria R. Kamstrup, PhD, et al – “Low-Dose (10 Gy) Total Skin Electron Beam Therapy for Cutaneous T-Cell Lymphoma: An Open Clinical Study and Pooled Data Analysis”
- Maja Maraldo, MD, PhD, et al – “Radiation Therapy Planning for Early-Stage Hodgkin Lymphoma: Experience of the International Lymphoma Radiation Oncology Group”
- Frederika A. Nimwegen, MSc, et al – “A simple method to estimate mean heart dose from Hodgkin lymphoma radiotherapy based on simulation X-rays”
- Andrea Riccardo Filippi, MD, et al – “Optimized Volumetric Modulated Arc Therapy vs. 3D-CRT for Early Stage Mediastinal Hodgkin Lymphoma without Axillary Involvement: a Comparison of Second Cancers and Heart Disease Risk”
- M.C. Aznar, PhD, et al – “Minimizing Late Effects for Patients With Mediastinal Hodgkin Lymphoma: Deep Inspiration Breath-Hold, IMRT, or Both?”
- Thatcher R. Heumann, BA, et al – “Total Skin Electron Therapy for Cutaneous T-Cell Lymphoma Using a Modern Dual-Field Rotational Technique”

“Few malignancies have been examined with the same history and rigor as the lymphomas,” said Anthony L. Zietman, MD, FASTRO, editor-in-chief of the Red Journal and professor of radiation oncology at Massachusetts General Hospital in Boston. “Meticulous study in a series of well designed trials by radiation oncologists and medical oncologists working together and separately has led us to where we are today. The exceptional studies in this Red Journal issue capture the spirit of investigation that has yielded really meaningful advances for contemporary lymphoma management.”

For a copy of any of the studies in the May 2015 Red Journal, contact ASTRO’s Press Office at press@astro.org. For more information about the Red Journal, visit www.redjournal.org. The May 2015 issue of the Red Journal is dedicated to and will be distributed at the International Lymphoma Radiation Oncology Group’s (ILROG’s) May 8-9, 2015 meeting, “Modern Radiation for Lymphoma: Updated Role and New Rules,” at Memorial Sloan Kettering Cancer Center (MSKCC), New York. The meeting is chaired by Joachim Yahalom, MD, FASTRO, founder and chair of ILROG; a radiation oncologist specializing in lymphomas, and member and professor at MSKCC; and a professor of radiation oncology at Weill Cornell Medical College. Co-sponsors of
the meeting include ASTRO, the European Society for Radiotherapy and Oncology (ESTRO) and MSKCC.

ABOUT ASTRO

ASTRO is the premier radiation oncology society in the world, with nearly 11,000 members who are physicians, nurses, biologists, physicists, radiation therapists, dosimetrists and other health care professionals that specialize in treating patients with radiation therapies. As the leading organization in radiation oncology, the Society is dedicated to improving patient care through professional education and training, support for clinical practice and health policy standards, advancement of science and research, and advocacy. ASTRO publishes two medical journals, International Journal of Radiation Oncology • Biology • Physics (www.redjournal.org) and Practical Radiation Oncology (www.practicalradonc.org); developed and maintains an extensive patient website, www.rtanswers.org; and created the Radiation Oncology Institute (www.roinstitute.org), a non-profit foundation to support research and education efforts around the world that enhance and confirm the critical role of radiation therapy in improving cancer treatment. To learn more about ASTRO, visit www.astro.org.

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