the Radiosurgery Society®

Bridging the Gap

RSSearch® Patient Registry Newsletter

Volume VII | Jul 2015

UPCOMING EVENTS

Webinars

Clinical Implementation of MR-IGRT for Stereotactic Body Radiotherapy

August 20, 9:00 am PDT

Meetings

SRS/SBRT: Safe & Accurate Delivery of Hypofractionated Radiation Therapy

Sept. 18-20, 2015

Detroit, Michigan

- - - - -

SRS/SBRT Scientific Meeting 2016

July 16-18, 2016

Orlando, Florida

Register for all events at www.therss.org

RSSearch® Patient Registry 2015 Mid-Year Summary

The RSSearch® Patient Registry continues to thrive and has now reached over 16,000 enrolled patients. In the past 6 months, 755 new patients treated with stereotactic radiosurgery (SRS) or stereotactic body radiotherapy (SBRT) have been enrolled in RSSearch. The number of participating centers continues to increase with 42 centers worldwide, including centers in the US, Australia and Germany. Between January 1 and June, 30 2015, the number one enrolling center was Barnabas Health, Toms River, NJ and the top 10 enrolling centers are listed below. Congratulations to the team at Barnabas Health and all the participating centers and patients that have made the first half of the year a success.

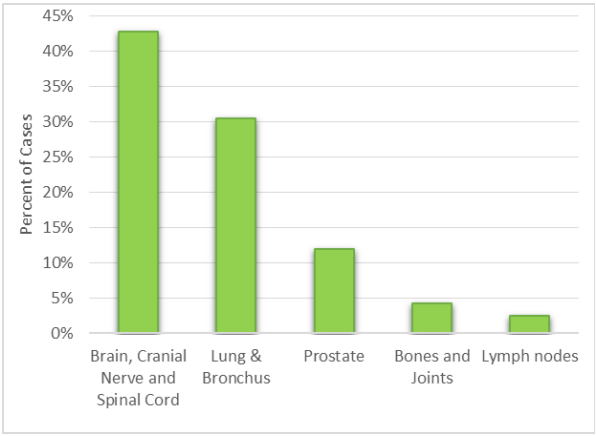

Figure 1. Top 5 SRS/SBRT treatment locations in RSSearch between January 1 —June 30 , 2015.

Top 10 Enrolling Centers Through June, 2015

1. **Barnabas Health, Toms River, NJ**
2. **Mercy Hospital, Springfield, MO**
3. **St. Francis Hospital, Memphis, TN**
4. **Penrose Cancer Center, Colorado Springs, CO**
5. **Pennsylvania Hospital, Philadelphia, PA**
6. **St. Mary's Medical Center, Huntington, WV**
7. **Franklin Square Hospital Center, Baltimore, MD**
8. **St. Joseph/Candler, Savannah, GA**
9. **Sir Charles Gairdner Hospital, Perth, Australia**
10. **Memorial Hospital West, Hollywood, FL**

A mid-year review of the aggregate data in RSSearch was conducted and the summary report is included in this issue of *Bridging the Gap, Volume VII, 2015* newsletter.

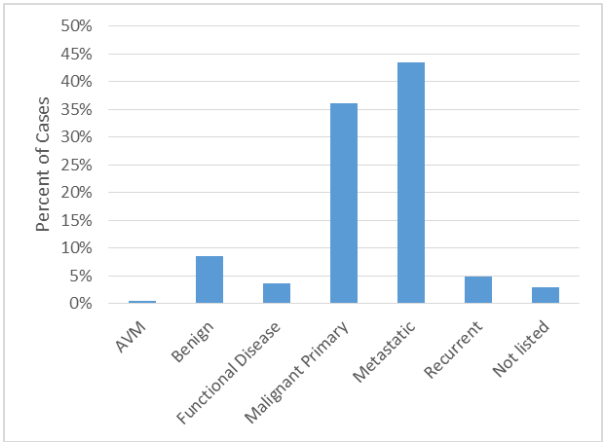

Figure 2. Distribution of lesion type in RSSearch from January 1— June 30, 2015

The top five treatment locations included brain/spine (43%), lung/bronchus (30%), prostate (12%), bones/joints (4%)and lymph nodes (2%), see Figure 1. Other treatment locations included liver, pancreas, head and neck, gynecological and kidney.

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Continued from Page 1.

The number of men (52%) and women (48%) were evenly distributed. The most common type of lesions were metastatic (44%) and malignant primary (36%) lesions (Figure 2). Other types of lesions included benign lesions (9%), recurrent lesions (5%) and trigeminal neuralgia (4%). The median SRS/SBRT dose delivered to all lesions was 30 Gy (range, 5—79 Gy) and the median number of fractions was 3 (range, 1—6).

The most common referral source was from medical oncologists (36%), followed by neurosurgeons (19%), pulmonologists (12%), urologists (9%) and radiation oncologists (9%)., see Figure 3. Self referral represented 2% on the patients enrolled.

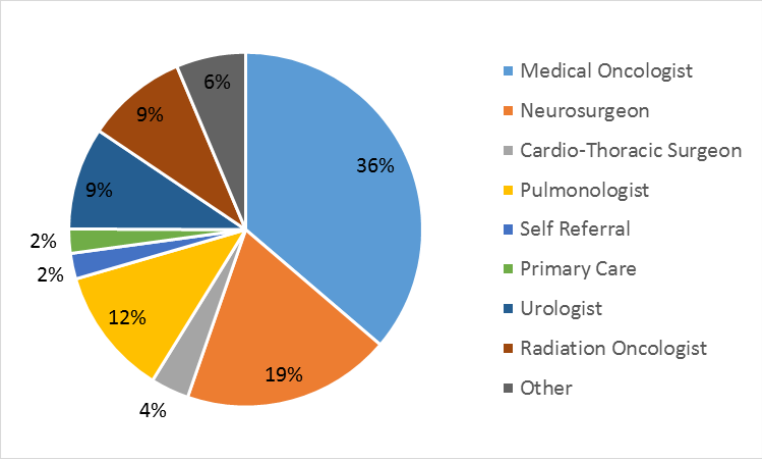

Figure 3. Referral sources for patients enrolled in RSSearch between January 1—June 30, 2015.

As a result of the hard work and efforts of the participating centers, the abstract "Stereotactic Body Radiotherapy for Centrally Located Lung Lesions" was presented by Dr. Hale Caglar, M.D. Radiation Oncology, University of Istanbul, Turkey, at the annual meeting of the International Society of Radiosurgery in Yokohama, Japan. The full manuscript by Davis, J. et al was published in the May, 2015 issue of Radiation Oncology (http://www.ro-journal.com/content/10/1/113).

In this study, 111 patients with 114 centrally located lung tumors (48 T1-T2,N0,M0 non-small cell lung cancer (NSCLC) and 66 lung metastases) were treated with SBRT at 19 academic and community-based radiotherapy centers in the US and Germany. Median follow-up was 17 months (range, 1–72). Median age was 74 years for primary NSCLC patients and 65 years for lung metastases patients ($p < 0.001$). SBRT dose varied from 16 – 60 Gy (median 48 Gy) delivered in 1–5 fractions (median 4 fractions). Median dose to centrally located primary NSCLC was 48 Gy compared to 37.5 Gy for lung metastases ($p = 0.0001$) and median BED_{10} was 105.6 Gy for primary NSCLC and 93.6 Gy for lung metastases ($p = 0.0005$). Two-year overall survival (OS) for T1N0M0 and T2N0M0 NSCLC was 79 and 32.1 %, respectively ($p = 0.009$) and 2-year OS for lung metastases was 49.6 %. Two-year local control (LC) was 76.4 and 69.8 % for primary NSCLC and lung metastases, respectively. Toxicity was low with no Grade 3 or higher acute or late toxicities.

The authors concluded that RSSearch patients with centrally located primary NSCLC were older and received higher doses of SBRT than those with lung metastases. Despite these differences, LC and OS was favorable for patients with central lung tumors treated with SBRT. Reported toxicity was low, although low grade toxicities were observed in patients where dose tolerances approached or exceeded published guidelines. Prospective studies are needed to further define the optimal SBRT dose for this cohort of patients.

Support the RSSearch® Patient Registry Initiative

If you are a Registry participant it is important that you:

- Continue to enter SRS/SABR/SBRT screened patients
- Complete screening, treatment and outcome data
- Update patient follow-up information

Become a Registry participant:

- Contact Nalani Brown at nbrown@therss.org

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SRS/SBRT: Safe and Accurate Delivery of Hypofractionated Radiation Therapy

A collaboration between AAPM & the RSS

Co-Sponsored By:

The Radiosurgery Society (the RSS) along with American Association of Physicists in Medicine (AAPM) are co-sponsoring a 2.5 day meeting titled "SRT/SBRT: Safe and Accurate Delivery of Hypofractionated Radiation Therapy" to be held September 18-20, 2015, in Detroit, Michigan. This comprehensive course is aimed specifically for clinical physicists and will address the many aspects of SRS/SBRT in a single format.

As an RSS members you will save $165 off the regular registration fee and all attendees will get a free copy of Stereotactic Radiosurgery and Stereotactic Body Radiation Therapy.

To find out more and to register for this first of its kind event visit: http://www.aapm.org/meetings/2015SBRT/

Meeting Objectives Include:

- Provide in-depth knowledge of current technologies used for SRS/SBRT treatments, including imaging and treatment planning.
- Demonstrate the advantages and drawbacks of each technology as it applies to the program goals in the clinic.
- Demonstrate methods to implement a well-designed clinical program for SBRT/SRS, including the quality and safety aspects.
- Provide a better understanding of the radiobiology, dose-fractionation schemes, and treatment planning goals of SRS/SBRT.

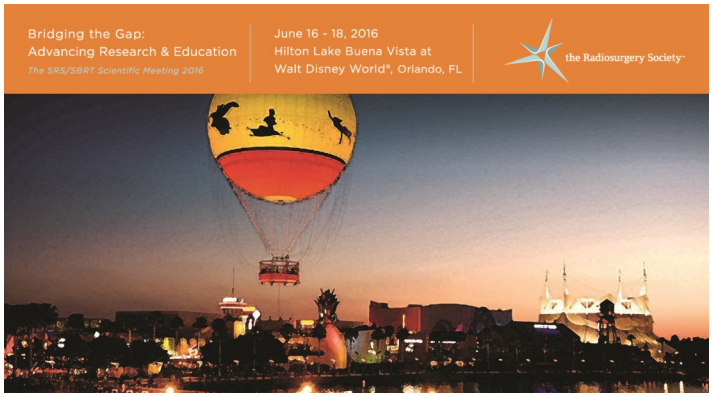
Meeting Highlights Include:

- 1.5 days dedicated to didactic talks by key experts
- 1 full day of clinic rotations, hands-on presentations and demonstrations at the Henry Ford Health System
- 20 breakout/roundtable discussions

The SRS/SBRT Scientific Meeting 2016

Bridging the Gap:

ADVANCING RESEARCH AND EDUCATION



The Radiosurgery Society® (RSS) Scientific Meeting a conference unlike any other. How? Because it's "your" meeting. Evolving and improving from year to year. We ask - you respond - we listen. We offer - you participate.

This year's meeting will offer 3 days filled with dynamic and lively exchanges with colleagues and industry leaders sharing information to advance research and education of stereotactic radiosurgery (SRS) and stereotactic body radiotherapy (SABR/SBRT).

What to Expect:

- Clinical and technical presentations on Extracranial and CNS applications
- Dedicated physics sessions
- Showdown - "*May the Force Be With You*"
- Performance & Quality Improvement Session (PQIS)
- Multiple Educational workshops
- More face-to-face time with clinical and industry experts than any other conference
- Exhibition Presentation Arena: Learn about the latest products and technologies
- Clinical and technical education credits

Abstract Submission will open in September. Find out more the meeting by visiting: http://therss.org/custompages/page23.aspx

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The RSS Hosted 2 SRS/SABR/SBRT Focused Sessions at the recent ACRO 2015 Annual Meeting

The attendees of the recent American College of Radiation Oncology (ACRO) annual meeting walked away with a greater understanding of SRS/SBRT treatment thanks to the speakers who presented on behalf of the RSS.

This annual meeting, themed ***Controversies, Collaboration and Personalized Care in Radiation Oncology***, was the first collaboration of its kind between the RSS and ACRO. Both of the RSS sessions were SRS/SBRT focused and held on Thursday, May 14, 2015.

The first of these sessions, SRS for Spine Lesions and Arteriovenous Malformations with the Radiosurgery Society (RSS), featured two focused presentations. Helen Shih, MD, of Mass General Hospital in Boston, MA, presented on the use of SRS treatment for arteriovenous malformations, followed by Kristin Redmond, MD, of Johns Hopkins University in Baltimore, MD and Michael Guiou, MD, of The Ohio State University in Columbus, OH speaking about the use of SRS treatment for spine tumors.

The later afternoon sessions, SBRT Treatment for Lung Lesions and SBRT for Gastrointestinal Tumors with the RSS, were just as riveting. Joseph Herman, MD, of Johns Hopkins University in Baltimore, MD, gave an exciting talk on the use of SBRT for liver tumors. Ravi Shridhar, MD, of Florida Hospital in Tampa, FL, followed with a presentation on SBRT treatment for locally advanced pancreatic cancer. The afternoon RSS sessions concluded with a presentation on SBRT treatment for lung cancer by Brian Kavanagh, MD, of the University of Colorado in Aurora, CO and Kevin Stephans, MD, of the Cleveland Clinic in Cleveland, OH.

All sessions were well-attended, and spoken about highly by the attendees. Both groups are looking forward to working together again towards the mutual goal of continued education and betterment of the field of SRS/SBRT treatment.

Coordinator's Corner: Meet RSSearch® Participants

Jodi Harr is the Manager of Clinical Research, the Cancer Registry, and the IRB at the Penrose Cancer Center in Colorado Springs, Colorado and has been involved in their Radiosurgery Program since May 2009. Penrose has been a participating in RSSearch Patient Registry since June 2010 and there are currently over 700 cases entered into the RSSearch Registry. Given the amount of Radiosurgery patients treated at Penrose, an important aspect to Jodi's responsibilities is managing the roles involved in contributing to clinical research and the RSSearch Registry.

Key to ensuring accuracy is the "village" it takes to conduct research and maintain the registry. Jodi acknowledges the value of each staff member's role in the process starting with their team of physicians, Dr. Anuj Peddada, Medical Director of Radiation Oncology and his colleagues, Dr. Alan Monroe and Dr. Andrew Tanner who provide valuable input and continually work with the staff to assure accurate data.

Tony Switzer, RT(R)(T), Lead Radiosurgery Therapist on the team, not only treats patients, but also introduces RSSearch to the patients, oversees the consenting process and assists with the initial planning downloads. Maintaining accurate long term follow-up patient information falls under the responsibility of the Research Department at Penrose with Jackie Green and Charla Stenman, RN.

"All members of this team have been instrumental in patient care and this registry provides such important data to improve patient care. The participation in the RSSearch Registry is such an important aspect to the long-term outcomes and research goals of the Penrose Cancer Center." stated Jodi Harr at Penrose Cancer Center, Colorado Springs, CO.

To reach Jodi Harr, please email JodiHarr@Centura.Org.

Penrose Cancer Center
Centura Health.