



In this issue:

RSSearch 2015 End-of-Year Summary

Initial Results of SBRT for Early-Stage Prostate Cancer Reported from

RSS and AAPM Co-Host Meeting on Safe and Accurate Delivery of SRS/SBRT

Coordinator's Corner: Meet the team at Philadelphia Cyber-Knife, PA

RSS Launches Channel on Cureus Journal of Medical Science

Upcoming Events: Meetings

SRS/SBRT Scientific Meeting 2016

July 16-18, 2016
Orlando, Florida

Register for all events at www.therss.org

RSSearch® Patient Registry 2015 End-of-Year Summary

The RSSearch® Patient Registry continues to thrive and has now reached over 17,400 enrolled patients. In the past year, 2,169 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 December, 31, 2015, the number one enrolling center was Mercy Hospital-Springfield, MO and the top 10 enrolling centers are listed below. Congratulations to the team at Mercy Hospital-Springfield and all the participating centers and patients that have made RSSearch a continued success.

Top 10 Enrolling Centers In 2015

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

An end of the year review of the aggregate data in RSSearch was conducted and the summary report is included in this issue of *Bridging the Gap, Volume VIII, 2016* newsletter.

The top five treatment locations reported in RSSearch in 2015 include brain/spine (40%),

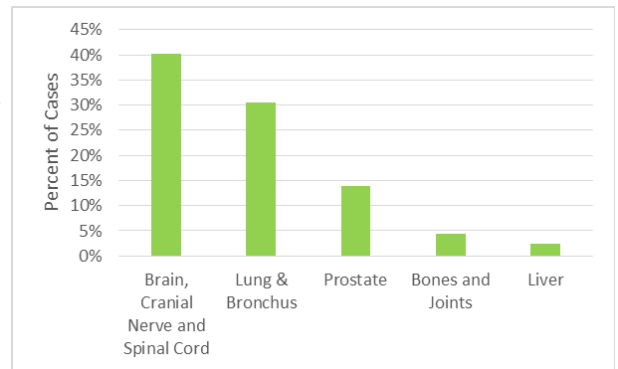


Figure 1. Top 5 SRS/SBRT treatment locations in RSSearch between January 1 — December 31, 2015.

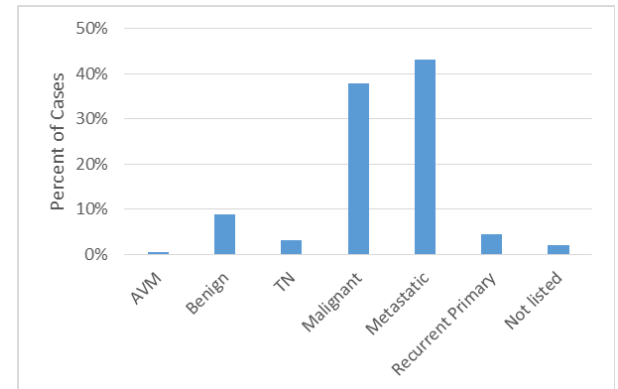


Figure 2. Distribution of lesion type in RSSearch from January 1— December 31, 2015

lung/bronchus (31%), prostate (14%), bones/joints (4%) and liver (3%), see Figure 1. Other treatment locations included pancreas, lymph nodes, head and neck, gynecological and kidney.

The number of men (52%) and women (48%) were evenly distributed.

Continue on page 2.



Continued from page 1.

The most common type of lesions were metastatic (43%) and malignant primary lesions (38%) (Figure 2). Other types of lesions included benign lesions (9%), recurrent lesions (5%), trigeminal neuralgia (TN; 3%) and arteriovenous malformations (AVM; 1%). 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 (39%), followed by neurosurgeons (18%), urologists (12%), pulmonologists (11%) and radiation oncologists (9%), see Figure 3. Self referral represented 2% of the patients enrolled.

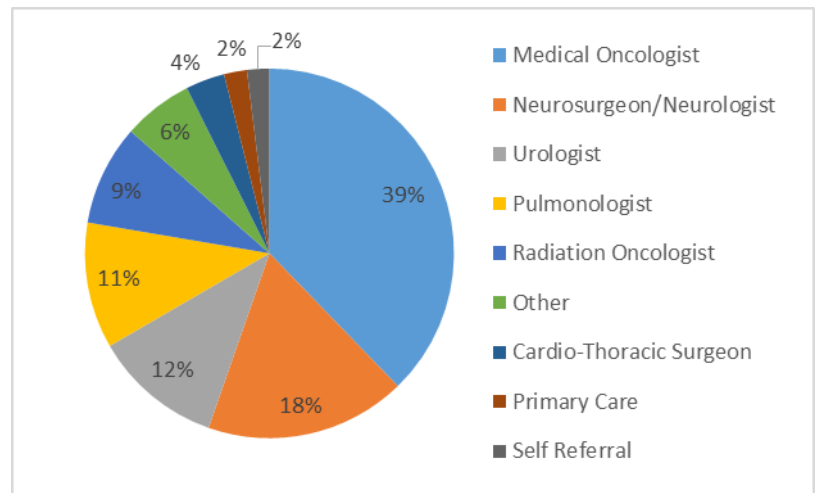


Figure 3. Referral sources for patients enrolled in RSSearch between January 1–December 31, 2015.

SBRT Treatment of Clinically Localized Prostate Cancer: Initial Results From RSSearch Published

Initial results of 437 early-stage prostate cancer patients treated with SBRT and enrolled in RSSearch were published December 4, 2015, in *The Cureus Journal of Medical Science* (<http://www.cureus.com/channels/therss>). The study titled “Stereotactic Body Radiotherapy for Clinically Localized Prostate Cancer: Toxicity and Biochemical Disease-Free Outcomes from a Multi-Institutional Patient Registry” included 189 low-, 215 intermediate- and 33 high-risk patients treated at 16 community and academic centers in the US and one academic center in Australia between 2004 and 2015. The median follow-up was 20 months (range, 1–64 months). The median age was 69 years, and the median pre-treatment PSA was 5.8 ng/ml. The majority of patients were treated with SBRT as monotherapy with doses ranging from 35 - 38 Gy delivered in 4-5 fractions.

There were no Grade 3 or higher acute or late GU or GI toxicities. The most common acute GU toxicity was urinary frequency, with acute Grade 1 and Grade 2 urinary frequency reported in 19% and 2% of patients, respectively. The most commonly reported acute GI toxicity was diarrhea. Acute Grade 1 and 2 diarrhea was reported in 4% and 1% of patients, respectively. Late Grade 1 and 2 urinary frequency was reported in 25% and 8% of patients, respectively. Late Grade 1 and 2 proctitis was reported in 3% and 2% of patients, respectively. Erectile dysfunction was not assessed in this study. Two-year bDFS for low, intermediate, and high-risk patients was 99.0%, 94.5%, and 89.8%, respectively ($p < 0.0001$ by log-rank test). Three-year bDFS was 99.0% and 91.4% for low and intermediate-risk, respectively. Fifteen patients had biochemical failures using the Phoenix definition of biochemical failure (nadir + 2 ng/ml).

The authors concluded early disease outcomes of SBRT for the treatment of clinically localized prostate cancer from a multicenter patient registry compare favorably with reports from single institutions. Acute and late GU and GI toxicities were minimal, and PSA response to SBRT was highly encouraging. Continued accrual and follow-up will be necessary to confirm long-term results.



the
Radiosurgery
Society®

Bridging the Gap

RSSearch® Patient Registry Newsletter

Volume VIII

Jan 2016

Coordinators Corner: Meet RSSearch® Participants

Michael F. Good, RN, BSN, MAR is the Nurse Navigator and Research Coordinator at Philadelphia CyberKnife in Havertown, Pennsylvania. Michael works with the RSSearch Patient Registry to facilitate the sharing of clinical data to support the collaborative efforts of research in stereotactic radiation therapy. According to Michael, "Coordination has been a team effort, from our physicians, physicist, dosimetrist, radiation therapist and administrative staff. In the world of radiation therapy, where everyone plays an integral part, having a registry that is user friendly and accessible moves our efforts forward and improves the care we provide."

The Philadelphia CyberKnife team treats over 300 patients a year, including brain, lung, prostate, pancreas, kidney, liver and many metastatic sites. Dr. Rachele Lanciano leads the research efforts at Philadelphia CyberKnife, along with Dr. John Lamond, MD, Medical Director, Luther Brady, MD, Director of Medical Research, Stephen Arrigo, MD, Billy Ding, MD., and Jun Yang, PhD, Chief Physicist. Dr. Lanciano commented, "Working with the RSSearch team has been a wonderful experience for Philadelphia CyberKnife with great collaboration and a shared passion for research. We hope to increase our participation and enrollment in 2016."

The entire treatment team has a part in data entry and maintenance as well as promotion of the registry. From helping to obtain consents, to downloading treatment plans the team is a well oiled machine. They do all this as they continue to treat patients with the highest level of clinical expertise and compassion. Maintaining accurate long term follow up is also a joint effort and while Michael coordinates, his efforts would fall short without the RSSearch staff and the staff at Philadelphia Cyberknife. To reach Michael F. Good, email him at: mgood@phillycyberknife.com.



The SRS/SBRT Scientific Meeting 2016 *BRIDGING THE GAP: Advancing Research and Education*



The Radiosurgery Society® (RSS) Scientific Meeting will be held at the Hilton Lake Buena Vista, Orlando, FL on June 16—18, 2016.

What to Expect:

- Clinical and physics presentations on SRS/SBRT extra cranial and CNS applications
- Dedicated physics sessions
- Showdown - "May the Force Be With You"
- Performance & Quality Improvement Session (PQIS)
- Bridging the Gap Between Immunotherapy & Hypofractionated Radiation Therapy
- More face-to-face time with clinical and industry experts than any other conference
- Exhibition Presentation Arena: Learn about the latest products and technologies

Abstract Submission Deadline:

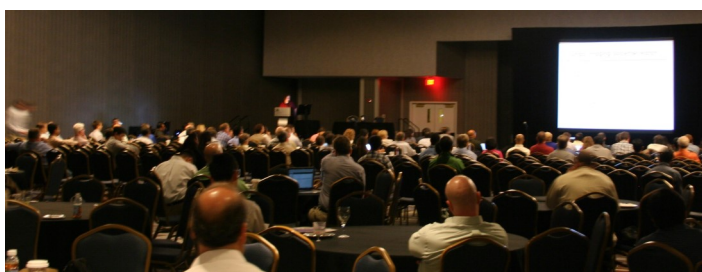
January 29, 2016

Find out more by visiting:

<https://www.regonline.com/theRSS2016ScientificMeeting>



The RSS and AAPM Co-Host Meeting on Safe and Accurate Delivery of Hypofractionated Therapy



Over 200 medical physicists, physicians, scientists and healthcare professionals from around the world attended the meeting **SRS/SBRT: Safe & Accurate Delivery of Hypofractionated Radiation Therapy** on September 18–20, 2015 in Detroit, MI. This meeting, was the first collaboration of its kind between the Radiosurgery Society (RSS) and American Association of Physicists in Medicine (AAPM). Attendees experienced 2.5 days of didactic lectures, hands-on-clinical rotations and expert round-table discussions focusing on the clinical practice, safety and quality assurance methods of SRS/SBRT. In addition, the attendees participated in a tour of the Henry Ford Health Systems Radiation Oncology Department in Detroit, MI and rotated through vendor-faculty presentations and hands-on demonstrations. “This was a great opportunity to pick the brains of experts in a comfortable fashion. I gained many take home lessons, “ stated an attendee. The RSS and AAPM look forward to future collaborative opportunities.

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

The RSS Launches Publishing Initiative with Cureus Medical Journal

The Radiosurgery Society® (RSS), announced in December, 2015 the launch of a new publishing initiative with the online medical journal, Cureus®, the world’s first and only crowdsourced, open access medical journal. The RSS will host a Channel on the Cureus website (www.cureus.com) dedicated to publications and presentations focused on stereotactic radiosurgery (SRS) and stereotactic body radiotherapy (SBRT).

“We are very excited to launch the new RSS Channel on Cureus. As the field of SRS/SBRT continues to grow, there is a need to share knowledge and education with the entire medical community in an efficient peer-reviewed manner,” said Richard Bucholz, M.D., Professor, Department of Neurosurgery at Saint Louis University in St. Louis and co-Deputy Editor of the RSS Cureus Channel. “Physicians and scientists can submit and view SRS/SBRT publications via the RSS Channel without fees, which means information can be shared more broadly for the advancement of the field and improved care of patients.”

“Radiosurgery is a critical component of modern cancer care, and the RSS has firmly established itself as an industry thought leader,” said John Adler, M.D., Cureus CEO and neurosurgeon at Stanford University School of Medicine. “With a dedicated Cureus channel, the RSS can now showcase the research portfolio of its members, while also making this life-saving data readily available to clinicians around the globe.”

The RSS Channel will also serve as a publishing platform for abstracts and poster presentations from the RSS Scientific Meetings. The RSS Channel on Cureus has no reader subscription charges and author submission is free, thereby encouraging greater dissemination of important SRS/SBRT research across all medical disciplines. Articles published via Cureus are also indexed in PubMed Central (PMC) and Google Scholar, and therefore easily searchable using these popular medical literature databases.