So this is our end of Winter edition newsletter and even though it still feels like snow around here, Spring is coming soon! Please take a moment to review the Mission and Vision for the department. A lot of effort is going into how the department evolves to support our continued growth and we always need to reflect back on our Mission and Vision so that we keep mindful of our ultimate goals. I am so impressed with all our team is doing and congratulations to all those with awards, promotions, and publications. We are celebrating 8 years and over 5000 patients treated in the proton center and our next proton patient alumni reception is next week. We hope you will be able to participate in the event. We continue with tremendous growth in our department with the addition of Princeton Health System to Penn Medicine. We look forward to strengthening our team with this addition. Please continue to send in your photos, announcements, and comments to support our newsletter!

**Roberts Proton Therapy Center Celebrates**

**8th Anniversary and Treatment of 5000th Patient**
Penn Medicine Welcomes Princeton Health

Princeton HealthCare System (PHCS) and its affiliates, including University Medical Center of Princeton, Princeton House Behavioral Health, Princeton HomeCare and the Princeton Medicine physician network, are now part of the University of Pennsylvania Health System (UPHS), one of the world’s leading academic medical centers. Click on link below for full article:


Care & Comfort Bundle from Hearts United Against Cancer (HUAC),

Sharon Civa, information technology officer, chronicles her experience receiving a Care & Comfort Bundle from Hearts United Against Cancer (HUAC), what it meant to her in her cancer battle, and how it led to her volunteerism with HUAC. HUAC is an all-volunteer, non-profit in Southern New Jersey, whose mission is to bring cheer to men, women, and children fighting cancer.

https://www.youtube.com/watch?v=C-WMRnHlJpM

Rad Onc Clinical Research Team Adopt-a-Family Update

The Clinical Research team raised $280 for Giften and her four children through our loose change jar! Thank you to everyone that contributed!

Thank you especially to David, Sally, and Sue for hosting the jar at their cubicles, and to Ashley for picking up the gift cards.

Giften and her children were adopted through Women in Transition. Since 1971, Women in Transition has provided empowerment counseling, referrals, and advocacy to women in Philadelphia who are endangered by domestic violence and/or substance abuse.

For more information about the work of Women in Transition, please visit their website at http://www.helpwomen.org/.
New Department Mission & Vision Statement

Mission
Penn Radiation Oncology is dedicated to serving both the local and global community through its mission of cutting edge and compassionate clinical care; pioneering scientific breakthroughs; and premier educational and training programs for oncology scholars of all disciplines and backgrounds. We are committed to delivering excellence in each of these areas, and believe that “EXCELLENCE IS STANDARD.”

Vision
Penn Radiation Oncology is a world leader in radiation oncology through its unparalleled and comprehensive clinical care and technical expertise in state-of-the-art radiation technologies and modalities. This preeminence is realized through a committed and expert staff, cutting-edge portfolio of transformative clinical, translational, physics and basic science research. This relies upon collaborative synergies with other academic and research institutions locally, nationally and globally. It is complemented by innovative, top-ranked educational programs within an environment integrating the highest-quality, personalized and compassionate patient care. Key to achieving our goals is honoring our commitment to excellence and professionalism and to provide a supportive, collaborative and high quality work environment for all our staff.

2018 Proton Patient Alumni Reception
SAVE THE DATE—April 9, 2018

Penn Medicine

PENN RADIATION ONCOLOGY and THE ROBERTS PROTON THERAPY CENTER present

The Penn Proton Patient Alumni Reception of the ROBERTS PROTON THERAPY CENTER

Monday, April 9, 2018 | 5:00 PM - 8:30 PM
The Smilow Center for Translational Research
On behalf of Rewards and Recognition, a department Happy Hour will be scheduled for Friday, April 20th.

Additional details will be provided via email.

SAVE THE DATE—Take Your Child To Work Day

April 26, 2018

The Department of Radiation Oncology invites the children of all staff between the ages of eight and fifteen to spend the day at PCAM and see what it is like to work in a hospital setting.

If your children will be participating, please RSVP no later than April 17, 2018 to Mary.Callahan@uphs.upenn.edu with their names, ages, and the best phone number to reach you at during Take Your Child To Work Day.

Additionally, we will need volunteers to supervise the children during the activities planned for the day. If you can offer your time during either the morning activity session or the afternoon activity session, please contact me by April 17.
Welcome New Employees

Danielle Girardo, MS
Junior Project Manager

Sanju John
Medical Dosimetrist

Ryan Kemp, BS
Practice Administrator

Taoran Li, PhD
Assistant Professor C-E, Physics Division

Joy McManus, BA
Faculty Affairs Coordinator

Ryan Kemp
Practice Administrator

Karen McCusker, BSN, RN
Nurse—Cherry Hill

Joy McManus, BA
Faculty Affairs Coordinator

Dana Palma, MA
Director of Finance

Therese Rutyna, BSN, RN, NE-BC
Clinical Nurse

Yongjun Yu, PhD
Research Specialist

Harris Avgousti
Lab Student Work

Lauren Carden
New Patient Coordinator

Promotions/ Appointments/ Awards

James Metz, MD
Robert Wood Johnson School of Medicine Distinguished Alumni Award
8th Annual Scholarship Gala (April 7, 2018)

Meg Garrett, RN, BSN, OCN RN, Nursing & QA Team
“Nurse-Driven Symptom Management Process for Common RT Side Effects”
Quality for Healthcare System Award

Susan Mazzoni, MPH
Director of Clinical Research

Dimitris Mihailidis, PhD
Chief of Clinical Physics—Network

Michelle Sparrow, MBA, RN
Manager of the Year Award

Tiffany Thompson, BSN, RN
Rosalyn Watts UPHS Nursing Excellence Award for Patient/Family Relationship

Alex Lin, MD
Inducted into the Academy of Master Clinicians

Yunhie Xie, PhD
Jack Fowler Junior Investigator Award, AAPM

Alireza Fotouhi Ghiam, MD
The Citizenship Award for Exemplary Commitment and Teamwork

Et-etsu Chen, MD
Gratitude Award, For Pete’s Sake

Meena Swaminathan
2018 Models of Excellence Nomination Award

Chelsea Petre
Financial Analyst
Rosalyn Watts UPHS Nursing Excellence Award for Patient/Family Relationship

Congratulations to Tiffany Thompson, BSN, RN for receiving the Rosalyn Watts UPHS Nursing Excellence Award for Patient/Family Relationship! As the lead RN for the CNS site team, Tiffany is actively involved in the department’s nurse-drive initiative to standardize patient education across all site teams. Her Welcome Letter became the model that all other teams utilized to create their own. Tiffany has served as a nursing representative on the Patient and Family Advisory Council for several years, and she is active in the Pennsylvania chapter of ONS. She performs regular volunteer work outside of work for various groups, and frequently participates in breast and brain cancer walks, CNS cancer awareness programs, and educational symposiums. Tiffany will be honored on April 30, 2018 at the UPHS Clinical Excellence Award Ceremony. She was nominated by Karen Leary, MSN, RN, OCN.

Manager of the Year Award

Congratulations to Michelle Sparrow, MBA, RN for receiving the Manager of the Year Award!

Distinguished Nurse Clinical Academy

Congratulations Meg Garrett BSN, RN, OCN, CSSGB on her induction into the Distinguished Nurse Clinician Academy. The Penn Medicine Distinguished Nurse Clinician Academy recognizes clinical nurses in all settings who exemplify practice excellence. This recognition is for clinical nurses who have demonstrated mastery in clinical practice and represent the gold standard in collegiality within the interprofessional team while keeping the patient and family at the center of care.

The Penn Medicine Distinguished Nurse Clinician Academy recognizes achievement in nurses who consistently work in a manner to improve the culture of service, engagement and patient/family advocacy in their practice across Penn Medicine. Meg embodies these characteristics. Her nomination was supported by her peers, management,
Holiday Giving
Radiation Therapists and Managers, along with Erin Davis, adopted a family of 5 for the holidays.

Holiday Basket Raffle
Penn Roses Perform

The a cappella group Penn Roses from the University of Pennsylvania performed in the waiting room on Friday, February 23. They were excellent, and the patients enjoyed the performance!
Stephen Avery, PhD, served as a guest lecturer for a conference in Cuba and a medical physics course held in Pakistan, sponsored by AAPM. He also served on a panel with the minister of Health in Rwanda to discuss strategies for radiation therapy in LMICs that was held at the 2017 AORTIC meeting in Rwanda. (http://aorticconference.org/)

American Association of Physicians in Medicine (AAPM)

Congratulations to Yunhe, Xie, PhD, for receiving the Jack Fowler Junior Investigator award that you received at the 2017 AAPM annual meeting. The Jack Fowler Junior Investigator award has been established since 2004 in honor of Dr. Jack Fowler, Emeritus Professor of Human Oncology and Medical Physics, University of Wisconsin. The winner is selected based on the score determined by the abstract reviewers and announced at the AAPM Awards Ceremony. For this year's 59th AAPM annual meeting, the ceremony was hosted on Monday, July 31st. The title of our abstract is "First Clinical Prompt Gamma Imaging for in vivo Range Verification in Pencil Beam Scanning Proton Therapy".
Holiday Cheer

Qfix Patient Positioning Symposium

Justin Kratz and Maya Korobeynik presented at the Qfix Patient Positioning Symposium in Vegas from June 4-7, 2017, where they spoke about SDX, the compression belt and our Motion Management committee (Minimize Movement: Maximize Care.)
National Nutrition Awareness—03/22/18

Radiation Oncology Pie Day—03/14/18
Healthcare Education Associates (HEA)

Dana Palma, Director of Finance, spoke at a Part D Mock Audit & PBM Summit for Healthcare Education Associates (HEA) and served as a Chairperson for the 2nd day of the summit. Her presentation topic was “Preparing for the Part D Financial Audit & FWA: What you need to know”

National Association of Proton Therapy Conference (NAPT) 2018

The National Association of Proton Therapy Conference was held from March 25-28 in Scottsdale, AZ. This year’s focus was: “Improving Access through Education, Awareness and Outcomes.” Penn Radiation Oncology was well represented in the presentation of the sessions.

Danielle Hoffman, Director of Revenue Cycle and Payer Initiatives presented as part of the Proton Therapy Coding, Coverage and Payment – Building Blocks and Recent Developments Panel.

Fern Nibauer-Cohen, Director of patient engagement and business development, moderated the Marketing and Patient Engagement: building Referrals and Creating a Proton Community panel

Dr. Justin Bekelman, Associate Professor, Radiation Oncology, presented as part of the Clinical Trial Overview panel.
Radiation Oncology Medical Residency Program

It is with great pleasure that we announce the appointment of Dr. Amardeep Grewal to Assistant Chief Resident and Dr. Michael LaRiviere to Education Officer (EO) for Trainees in the Department of Radiation Oncology at University of Pennsylvania, effective July 1, 2018.

Dr. Grewal will work closely with the current Chief Residents, Drs. David Guttmann and George Chao, as he transitions into his new role over the coming months. He will officially assume the title in July as Dr. Chao becomes the Senior Chief Resident.

As our next EO, Dr. LaRiviere will help to lead educational programs for medical students, non-departmental residents and fellows who spend time in the department over the next two years.

Please congratulate Dr. Grewal and Dr. LaRiviere on their respective appointments, and in acknowledging the talents that earned them these leadership roles. Let us also take this opportunity to thank Dr. Guttmann and Dr. Vogel in advance for their exemplary service to the department over the past 2 years.

Radiation Oncology Physics Residency

It is with great pleasure that we announce the appointment of Dr. Heather Petroccia as our next Physics Chief Resident in the Department of Radiation Oncology at the University of Pennsylvania, effective July 1st, 2018.

Dr. Petroccia will work closely with the current Physics Chief Resident, Dr Shannon O’Reilly as she transitions into her new role over the coming months. She will officially assume the title in July when Dr O’Reilly graduates.

Please join us in congratulating Dr. Petroccia on her appointment, and in acknowledging the devotion and hard work that earned her this leadership role. Let us also take this opportunity to thank Dr O’Reilly in advance for her exemplary service to the department and for the fantastic job that she did for the physics residency program over the past year.
Medical Residency Match Results

In alphabetical order, below are the 4 outstanding applicants who will be joining our department in July 2019 (after an internship year with the Department of Medicine at HUP which will start in June 2018). Also listed are their anticipated degrees from their current institutions, as well as their undergraduate training affiliations.

Emily Anstadt
MD/PhD, University of Connecticut School of Medicine
BS, University of Wisconsin, Madison (Microbiology & Immunology)

Kristine Kim
MD, Boston University School of Medicine
BS, Massachusetts Institute of Technology (Biological Engineering)

Russell Maxwell
MD, Johns Hopkins University School of Medicine
BSPH, University of North Carolina at Chapel Hill (Biostatistics and Chemistry)

Nishant Shah
MD, Boston University School of Medicine
BSE, Boston University (Biomedical Engineering)

We would like to thank everyone for their efforts in supporting all of the medical students who spend time in our department. We sincerely appreciate everyone’s contributions that collectively ensure the success of our recruitment process each year.

Medical Physics Residency Match Results

We are happy to share with you the results of the medical physics residency match for 2018. As always, admission to the medical physics residency program is highly competitive, and we are delighted that the following four individuals (in alphabetical order) will join our department on July 1st.

- Chingyun Cheng, PhD, Physics, Duke University (2016)
- Wendy Harris, PhD, Medical Physics, Duke University (2018)
- Peyton Irmen, MMP, Medical Physics, University of Pennsylvania (expected May 2018)
- Michelle Kim, PhD, Physics and Astronomy, University of Pennsylvania (2017)

We want to thank everyone who has been involved with the residency program, as it is a collective effort. Please join us in welcoming these outstanding candidates to our program!

Jim, Lei, Neha, Shibu and Kevin
Global Proton Education Program
Rutherford Cancer Centres, United Kingdom

Global Proton Education Program
Christie Hospital, Manchester, UK
2017 Quality and Safety Award Winner

The project entitled “Nurse-Driven Symptom Management Process for Common Radiation Therapy Side Effects”, led by Meg Garrett, has been selected to receive the 2017 Quality and Safety Award for CPUP as the Operational Award winner.

This award acknowledges Penn Med departments who have exhibited leadership and innovation in activities that ensure high quality clinical outcomes, patient satisfaction, patient safety, and operational improvement.

Up to 95% of patients experience grades 1, 2, 3 toxicity during treatment: radiation dermatitis, oral mucositis, and/or esophagitis. This project established a pathway for nurses to manage patient’s symptoms autonomously, in collaboration with Pharmacy in providing predictive kits based on treatment site. Kits include: Domeboro’s solution, Aquaphor with lidocaine, MMW (Magic Mouthwash), 2% Viscous lidocaine. Additionally, this project liberated 500 hours of nursing time in one year, provided ~$59,000 in pharmacy revenue annually, and department savings from having to stock these supplies. The project reduced patient wait time for intervention and care.

Comments from the judging group include: “Excellent, meets all blueprint goals”, “Well constructed project, big savings, win for all”, “Excellent example of process improvement. Solid results.”

The team includes: Meg Garrett BSN, RN, OCN, CSSGB; Edna Volz MS, CMQ/OE, CSSBB; Erin Davis MSN, CRNP, AOCNP; Karen Leary MSN, RN, OCN; Maureen McDonald BSN, RN, OCN, CMSRN; Emil Matchev BSN, RN; Michelle Sparrow MBA, RN; Alex Lin MD; Gary Freedman MD; Richard Kriska RPh; Christophe Bivens CPhT; Genevieve Levans MBA, RPh; Donna Capozzoli PharmD, BCOP.
What's New at Oncolink?

Our medication teaching sheets have all been updated! We have teaching sheets on the newest cancer treatments approved by the FDA. These are a great tool for practitioners to teach patients about their medications! Our teaching sheets provide education about side effect management, administration tips, interactions, and information about insurance coverage and access to medications.

Our new Psychosocial Treatment Binder Builder, is also LIVE! This tool allows HCP’s to build a patient education binder focused on psychosocial issues in cancer care, including practical (housing, insurance, transportation), emotional (coping with cancer, depression, anxiety), and spiritual concerns.

RadComp Trial is a pragmatic randomized clinical trial of patients with locally advanced breast cancer randomized to either proton or photon therapy. Participants are followed longitudinally for cardiovascular morbidity and mortality, health-related quality of life, and cancer control outcomes. This study is open for enrollment. ClinicalTrials.gov Identifier: NCT02603341

Don’t be a stranger!

Email: Radcomp@uphs.upenn.edu
Website: www.RadComp.org
Social:
fb.me/TheRadCompStudy
twitter.com/RadCompStudy
The DAISY Award
Nomination Form

The DAISY Award
The DAISY Award for Extraordinary Nurses is granted by the DAISY Foundation to nurses who demonstrate extraordinary compassion and nursing care, as well as exemplary communication skills, in their day-to-day work. The Children’s Hospital of Philadelphia’s Nursing Recognition Committee will select a nurse each month from the submitted nominees who embody the principles of the award.

Each awardee will be honored at a special ceremony and will be presented with a certificate proclaiming her or him an extraordinary nurse, as well as a DAISY Award pin and a hand-carved sculpture entitled “A Healer’s Touch.” In addition, each recipient’s unit will receive a large celebratory banner to display for a month, as well as Cinnabon® cinnamon rolls.

The DAISY Foundation
DAISY stands for Diseases Attacking the Immune System. The DAISY Foundation was started by the family of J. Patrick Barnes, who died at age 33 from complications of idiopathic thrombocytopenic purpura, a blood disorder. Patrick and his family were grateful for the extraordinary nursing care he received during his illness.

For more information about the Foundation, go to www.daisyfoundation.org.
Congratulations!

Co-PIs Dr. Yi Fan and Dr. Steven Brem received the 2018 RadOnc Translational Center of Excellence Grant (RadOnc TCE), titled, *Development of RadMφ Therapy for glioblastoma.*

**Dr. Yi Fan** also published the paper, “Vascular niche IL-6 induces macrophage M2 polarization in gliomblatoma through HIF-2α”, in *Nature Communications.* **Authors:** Wang Q, He Z, Huang M, Liu T, Xu H, Ma P, Zhang L, Zamvil SS, Hidalgo J, Zhang Z, O’Rourke DM, Dahmane N, Brem S, Gong Y, & Fan Y. **Abstract:** Glioblastoma, the most common type of primary brain tumor, is a lethal human malignancy without efficient therapy currently available. Here we show that, in the tumor microenvironment, vascular endothelial cells release IL-6 to activate local macrophages and induce cancer progression. Interestingly, IL-6 blockade either by genetic ablation or pharmacological inhibition improves mouse survival in a preclinical tumor model, suggesting that IL-6 may represent a promising target for immunotherapy of glioblastoma.

**Dr. Andrea Facciabene** published “Gut microbiota modulates adoptive cell therapy via CD8α dendritic cells and 1 IL-12”, in *JCI Insight.* **Authors:** Mireia Uribe-Herranz, Kyle Bittinger, Stavros Rafail, Sonia Guedan, Stefano Pierini, Ceylan Tanes, Alex Ganetsky, Mark A. Morgan, Saar Gill, Janos L. Tanyi, Frederic D. Bushman, Carl H. June, Andrea Facciabene. **Abstract:** Adoptive T-Cell therapy (ACT) is a promising new modality for malignancies. In the JCI insights work, we report that adoptive T-cell efficacy in tumor-bearing mice is significantly affected by differences in the native composition of the gut microbiome, treatment with antibiotics or by heterologous fecal transfer. Depletion of bacteria with vancomycin, a gram positive antibiotic, decreased the rate of tumor growth in mice receiving ACT, whereas treatment with neomycin and metronidazole, a cocktail of gram negative antibiotics, had no effect, indicating the role of specific bacteria in host response. Collectively, our findings demonstrate an important role played by the gut microbiota in the antitumor effectiveness of ACT and suggest new avenues to improve response to ACT by altering the gut microbiota.
The retreat for the Radiobiology and Imaging Program of the Abramson Cancer Center was held on December 1st. The day consisted of podium and poster presentations by RBI faculty and their laboratories and was highlighted by the lecture of Keynote Speaker, George Sgouros, PhD from Johns Hopkins University School of Medicine. Dr. Sgouros shared his work on, “Imaging, Dosimetry and Radiobiology for Radiopharmaceutical Therapy”. We also recognized the exciting research being performed by trainees in the RBI program in the form of two poster awards, presented to researchers in the Radiation Oncology and Radiology departments. Spyridon Bakas (Radiology) was recognized for his work in “Non-invasive in vivo biomarker of EGFR pathway activation alterations in glioblastoma, from clinically-acquired dynamic susceptibility contrast magnetic resonance imaging: the ‘φ’ index”. Also, Saad Sheikh (Radiation Oncology) received an award for “Targeting treatment-refractory glioma stem cells via activation of the integrated stress response”. Congratulations!
Welcome:
Penn Radiation Oncology Research would like to welcome Yongjun Yu, Research Specialist in Andy Minn’s lab. We also welcome post-baccalaureate, Adam Kazimierczak to Amit Maity’s lab.

Upcoming Research Seminars:
All Seminars are in SCTR 8-146Ab from 12-1pm

Thursday, March 22, Invited Speaker: Dr. Steven Lin, MD Anderson, TX
Thursday, April 5, Invited Speaker: Dr. Xing Fan, University of Michigan
Thursday, April 12, RBI Seminar: Dr. Alexander Lin, UPenn
Thursday, May 10, RBI Seminar: Dr. Abass Alavi, UPenn
Thursday, May 17, Yuhas Award Lecture and Reception: Dr. Dietmar Siemann, University of Florida
Thursday, May 24, Invited Speaker: Dr. Jonathan Celli, University of Massachusetts
Thursday, May 31, Invited Speaker: Dr. Geoffrey Hugo, Washington University
Thursday, June 14, RBI Seminar: Dr. Timothy Zhu, UPenn
Thursday, June 28, Invited Speaker: Dr. James Mitchell, NCI
Penn Radiation Oncology
Cherry Hill

The team at Cherry Hill join the fun and participated in a holiday door decorating contest. Pictured are Karen Costello, Ken Hogue, Tammi Fisher and Dr. Ben Goldsmith.

Another team builder during the holidays at Cherry Hill… Pictured (left to right) Fallon Shea, Jackie Gribbin, Karen McCusker, Dr. Ben Goldsmith, Linda Philip, Tammi Fisher and Karen Costello. Patients loved our ugly sweater OTV day!

The Tri State K9 Pet Therapy Program visited with the team at Cherry Hill. Patients and staff all appreciated the extra special visitors! Pictured from left to right are Fallon Shea, Linda Philip, and Jackie Gribbin.
Chestnut Hill Eagles Pep Rally!!!

AROUND THE NETWORK
WINTER 2018 NEWSLETTER

CHESTNUT HILL RADIATION ONCOLOGY
AROUND THE NETWORK...

WINTER 2018 NEWSLETTER

Doylestown Eagles Pep Rally

Pictured left to right:
Eleanor Spornak
Kayla Cacchiamala
Lisa Brooks
Dr. Bill Rate
Gina Wierzbowski

Doylestown Celebrates Doctors’ Day

Dr. Lally and Dr. Rate dined with staff and enjoyed ice cream cake in honor of Doctors’ Day.
AROUND THE NETWORK...

Valley Forge Celebrates 5th Birthday

Chestnut Hill Patient Recognizes Care Team
For Pete’s Sake Beach Ball Gala 2018

Congratulations to Dr. Et-tsu Chen on receiving the Gratitude Award at this year’s Gala! The award is given to honor a medical professional or medical center that directly supports the mission of For Pete’s Sake and has made a positive impact in the lives of the families FPS helps.

CCH/VF Practice Manager

CCH/VF staff celebrated a going away for Jamie Maturo, the CCH/VF practice manager.
MOVIE REVIEW: Three Billboards Outside Ebbing, Missouri

Directed by: Martin McDonagh
Review By: Eli Glatstein, MD

I finally saw this movie, and it is a genuinely terrific film. It was written and directed by Martin McDonagh, a well-known Irish playwright who usually writes about Ireland and the down-trodden. This time, he wrote this script about red-necked mid-America and directed it, and it’s about small town USA.

It not only has a catchy, unusual title, but it also has superb direction and marvelous ensemble acting.

The plot is fundamentally straightforward. Frances McDormand, who won an academy award several years ago in Fargo, plays Mildred, a woman full of rage and anger because her only daughter was murdered seven months earlier after being raped, beaten, and then burned alive. The reason for her outrage is that the local sheriff hasn’t been able to come up with any suspects. She considers him incompetent and it turns out that he simply has no leads. He also has pancreatic cancer, which comes out during the middle of the film. The sheriff is played by Woody Harrelson, and I have to say he gives a terrific performance here. I’m not a Harrelson fan, but he really comes across as small-town America. The other key character in the movie is a deputy played by Sam Rockwell. Rockwell is a terrific actor who hasn’t received a lot of accolades but he’s superb in this role of a somewhat dim-witted, red-necked deputy who takes advantage of his status as much as he can.

McDonagh gave an interview where he said he had written the script with those three actors in mind specifically. Well, he certainly picked well. It’s difficult not to get involved with this movie.

The thing I personally enjoyed about the movie was the characterization of the small-town people involved. Coming from such a small town myself in Iowa, which is immediately north of Missouri, McDonagh really captures the middle American persona. The movie in many ways is sad, but there’s an enormous amount of catchy one liners and dark humor. You have to be prepared for lots of profanity, particularly from the sheriff, who’s profane even to his children. For a while I thought I was back in the military watching the film because the dialogue is so raw. Nonetheless, it is the way that people speak in that part of the world, and I think that this is one film that you will not forget.

McDormand, with her hair swathed in a bandana, has to be a leading candidate for a Best Actress Oscar. She’s normally a character actress, but here there is no question that she carries this movie. Harrelson and Rockwell will be competing for the Best Supporting Actor Award.
Publications:


Ahn PH, Finlay JC, Gallagher-Colombo SM, Quon H, O'Malley BW, Weinstein GS, Chalian A, Malloy K, Sollecito T, Greenberg M, Simone CB 2nd, McNulty S, Lin A, **Zhu TC,** Livolsi V, Feldman M, Mick R, **Cengel KA,** **Busch TM.** Lesion Oxygenation Associates with Clinical Outcomes in Premalignant and Early Stage Head and Neck Tumors Treated on a Phase 1 Trial of Photodynamic Therapy. Photodiagnosis Photodyn Ther. 2017 Nov 4. PMID: 29113960

**Ong YH,** **Kim MM,** Finlay JC, **Dimofte A,** Singhal S, Glatstein E, **Cengel KA,** **Zhu TC.** PDT dose dosimetry for photofrin-mediated pleural photodynamic therapy (pPDT). Phys Med Biol. 2017 Nov 6. PMID: 29106380


Publications:

Acoustic-based proton range verification in heterogeneous tissue: simulation studies
Kevin C Jones, Wei Nie, James C H Chu, Julius V Turian, Alireza Kassae, Chandra M Sehgal and Stephen Avery

Proton range verification in homogeneous materials through acoustic measurements
Wei Nie, Kevin C Jones, Scott Petro, Alireza Kassae, Chandra M Sehgal and Stephen Avery

