Muhammad Mohsin Fareed, MD, DABR

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Contact Information

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Current Position: Assistant Professor Radiation Oncology, West Virginia University School of Medicine

Education:

Harvard Medical School, Radiation Oncology Residency via Alternate Pathway, 2019

- Educational Commission for Foreign Medical Graduates: MD (Medicine) 2012
- College of Physicians & Surgeons Pakistan: FCPS (Radiotherapy & Oncology) 2008
- Nishtar Medical College, Multan, Pakistan: MBBS (Medicine & Surgery) 2002

Postgraduate Education and Training:

03/2002 - 03/2003: Internship, Medicine & Surgery, Nishtar Medical College, Multan, Pakistan

04/2003 - 12/2003: Senior House Officer, Emergency Medicine, Nishtar Medical College, Multan, Pakistan

12/2003 - 12/2007: Resident, Radiation Oncology, Shaukat Khanum Memorial Cancer Hospital & Research Center, Lahore, Pakistan

05/2014 - 07/2014: Research Fellow, Radiation Oncology, Henry Ford Health System, Detroit, MI

06/2015 - 06/2017: Fellow, Advanced Radiation Oncology, Fox Chase Cancer Center, Philadelphia, PA

07/2017 - 06/2019: Clinical Fellow in Radiation Oncology, Dana-Farber / Brigham & Women's Cancer Center, Harvard Medical School, Boston, MA

05/2013: Medical Physics Course, Christie Hospital NHS Foundation Trust, Manchester, UK

10/20/2016 – 10/21/2016: Penn Clinical Trials in Oncology Course and Workshop, at Smilow Center for Translational Research, Perelman School of Medicine, University of Pennsylvania, PA

01/10/2018 – 01/12/2018: Workshop on Value Based Health Care Delivery at Harvard Business School, Boston, MA

01/17/2018 – 01/19/2018: Methods in Clinical Research at Dana Farber Cancer Institute, Harvard Medical School, Boston, MA

11/18/2024: AI series: Introduction to Healthcare, Stanford University School of Medicine

Faculty Academic Appointments:

04/2011-05/2015: Assistant Consultant, Radiation Oncology, King Fahad Medical City, Riyadh, Saudi Arabia

07/2017-06/2019: Instructor, Psychosocial Oncology & Palliative care, Dana Farber Cancer Institute, Harvard Medical School, Boston, MA

12/2019 – 04/2022: Consultant Radiation Oncologist, Shaukat Khanum Memorial Cancer Hospital & Research Center, Johar Town, Lahore, Pakistan

Appointments at Hospitals / Affiliated Institutions:

01/2008-01/2009: Medical Officer, Adult Oncology, Shaukat Khanum Memorial Cancer Hospital & Research Center, Lahore, Pakistan

02/2009-02/2011: Specialist Registrar, Radiation Oncology, Northwest Armed Forces Hospital, Tabuk, Saudi Arabia

Certifications:

- ABR Board certified in Radiation Oncology
- ECFMG certified.
- ACLS / BLS certified.

Medical Licensure:

- Massachusetts Board of Registration in Medicine: 277830 (Full license)
- West Virginia Board of Medicine: 30748 (Full license)
- Pakistan Medical & Dental Council: 39538-P
- Saudi Commission for Health Specialties: 10-T-M-0306710

Professional Societies Membership:

- ASCO (American Society of Clinical Oncology)
- ASTRO (American Society for Radiation Oncology)
- ESTRO (European Society for Radiotherapy and Oncology)
- PSCO (Pakistan Society of Clinical Oncology)

Editorial Activities:

- Radiotherapy and Oncology (The Green Journal)
- Journal of Clinical Oncology- Global Oncology (JCO GO)
- International Journal of Radiation Oncology, Biology, Physics (Red Journal)

Honors and Awards:

King Fahad Medical City

2013 Best Publication Award

2012 Research Travel Grant

Medical School Scholarship

1997-2002 National Fertilizers Corporation Scholarship

• Undergraduate Scholarships

1994-1996 Hijri Scholarship

Board of Intermediate and Secondary Education scholarship

Report of Current Projects:

- Dana Farber Cancer Institute (DFCI 18-614): Evaluation of Quality-of-Life Issues Among Patients Receiving SBRT for Non-Organ Soft Tissue and Bone Metastases
- Dana Farber Cancer Institute (DCFI: 16-207): Phase II Protocol Evaluating Hypofractionated and Stereotactic Body Radiation Therapy for Oligometastatic Disease of The Bone
- Chemoradiotherapy Using Volumetric Modulated Arc Therapy for Locally Advanced Esophageal Cancer: A Single Institute Experience, revision submitted for publication in JCO Global Oncology 11/2024

Publications and Presentations:

Editorial

• Evolution of Radiation Oncology in Pakistan. Int J Radiation Oncol Biol Phys, Vol.105, No. 1, pp. 11-16, 2019. doi.org/10.1016/j.ijrobp.2019.04.016

Original Research

- Samuel E, Zaman S, Bakar MA, **Fareed MM**. Hypofractionated versus conventional fractionation external beam radiotherapy in intermediate and high risk localized prostate cancer. Discov Oncol. 2024 Feb 2;15(1):27. doi: 10.1007/s12672-024-00876-7. PMID: 38305836
- MA Mansha, AN Abbasi, MM Fareed. Reply to A. Mangla. JCO Global Oncology 9. 2023
- Syed M. Raza, Adeel Riaz, Muhammad A. Mansha, Samir Fasih, Umme Kalsoom Awan, Kashif Siddiqui, Ilyas Rafi, Ahmed Shoaib, Muhammad Abu Bakar, and Muhammad M. Fareed.
 Radiotherapy and Limb-Sparing Surgery in the Management of Localized Soft Tissue Sarcomas: Tertiary Care Center Experience from Pakistan. JCO Global Oncology 2023:9
- Chen JJ, Sullivan AJ, Shi DD, Krishnan MS, Hertan LM, Roldan CS, Huynh MA, Spektor A, Fareed MM, Lam TC, Balboni TA, Characteristics and Predictors of Radiographic Local Failure in Patients with Spinal Metastases Treated with Palliative Conventional Radiotherapy, Advances in Radiation Oncology (2021)
- Eldib A, Fareed MM, Weiss SE, Hayes SB, Binh N, Mora G, Li J, Chibani O, Abdelgawad MH, and Ma C-M. Dosimetric Evaluation of a Novel Rotating Gamma Ray System for Stereotactic Body Radiation Therapy (Oct 2020). J Radiat Oncol, DOI 10.1007/s13566-020-00437-9

- Huynh MA, Roldan C, Nunes P, Kelly A, Taylor A, Richards C, Fareed MM, Gorman D, Groff M, Ferrone M, Lu Y, Chi JH, Spektor A, Balboni T. Characteristics of patients and treatment recommendations from a multidisciplinary spinal tumor program (2020). Palliative Medicine Reports 1:1, 1–6, DOI: 10.1089/pmr.2020.0070
- Rolden CF, Chen JJ, Fareed MM, Churilla TM, Hameed MY, Galloway TJ. Impact of tumor-specific growth rate on treatment failure for non-oropharyngeal head and neck cancer. Laryngoscope, 00:1– 7, 2019
- Fareed MM, Pike LRG, Bang A, Huynh MA, Taylor A, Spektor A, Awad MM, Ott PA, Krishnan M, Balboni TA and Schoenfeld JD. Palliative Radiation Therapy for Vertebral Metastases and Metastatic Cord Compression in Patients Treated with Anti-PD-1 Therapy (2019). Front. Oncol. 9:199. doi: 10.3389/fonc.2019.00199
- Shah MM, Isrow D, Fareed MM, Wen N, Ryu S, Ajlouni M, Siddiqui F. Single institution experience treating adrenal metastases with stereotactic body radiation therapy. J Can Res Ther 2019 Mar;15(Supplement): S27-S32. doi: 10.4103/jcrt.JCRT_655_16
- **Fareed MM**, Spektor A, Krishnan M, Hertan MH, Taylor A, Kelly A, Huynh MA, Balboni TA. Characteristics of urgent palliative cancer care consultations encountered by radiation oncologists. Journal of Community and Supportive Oncology 2018;16(4): e193-e199
- Fareed MM, DeMora L, Esnaola NF, Denlinger CS, Karachristos A, Ross EE, Hoffman J, Meyer JE.
 Concurrent chemoradiation for resected gall bladder cancers and cholangiocarcinomas. J
 Gastrointest Oncol 2018;9(4):762-768. doi: 10.21037/jgo.2018.05.09
- Fareed MM, Eldib AA, Weiss SE, Hayes SB, Li J, Ma CC. A treatment planning comparison between a novel rotating gamma system and robotic linear accelerator based intracranial stereotactic radiosurgery / radiotherapy. 2018 Phys. Med. Biol. Volume: 63 Issue 3
- Fareed MM, Amro AS, Bayoumi Y, Tunio MA, Ismail AS, Akasha R, Mubasher M, Al Asiri M. Intensity-Modulated Radiotherapy with Simultaneous Modulated Accelerated Boost Technique and Chemotherapy in Patients with Nasopharyngeal Carcinoma. BMC Cancer July 2013 13:318
- Fareed MM, Amro A S, Bayoumi Y, Orz YI, Tunio M, Maklad A, Riaz K. LINAC Stereotactic Radiosurgery for Brain Arteriovenous Malformation: A Single Institutional Experience from Saudi Arabia. Neuroscience Discovery April 2013
- Tunio MA, Asiri MA, Fareed MM, Ahmed S, Bayoumi Y. Bladder Preservation with Concurrent Radiotherapy and Gemcitabine following Maximal Transurethral Resection for Muscle Invasive Bladder Cancer: Single Institutional Experience. J Nucl Med Radiat Ther 3:121. Feb 2012
- Asiri MA, Tunio MA, Amro A, Ahmad S, Bayoumi Y, Fareed MM. Results of Intensity Modulated Radiation Therapy in Patients with Well Differentiated Thyroid Carcinoma: Experience of King Fahad Medical City. J Nucl Med Radiat Ther S6:001. June 2012
- Rashid A, Ahmed S, Ali M, Fareed M, Bilal M. Role of Neo-Adjuvant Chemoradiation in Locally Advanced Rectal Cancers. J Coll Physicians Surg Pak. 2010 Mar, Vol. 20 (3): 175-180

Case Reports

- MA Tunio, MA Asiri, Fareed MM, NM Ali. Tongue metastasis as an initial manifestation of Distant Metastasis in Oesophageal Adenocarcinoma. Pakistan Journal of Medical Sciences, July 2014; 30 (4): 920-923
- Tunio MA, Al-Asiri M, Fareed MM. Uterine Leiomyosarcoma metastasizing to the Heart. J Coll Physicians Surg Pak. 2014 Mar;24 Suppl 1: S20-1

- Fareed MM, Amro AA, Bayoumi Y, AlQahtani KH, Fatani HA, Tunio MA, Khalid F. One patient Three head and neck primaries: nasopharyngeal, tongue and thyroid cancers. BMC Research Notes 2013, Oct 28;6:432
- Riaz K, **Fareed MM**, Shuja M. Herpes simplex encephalitis occurring during chemo-radiotherapy in nasopharyngeal carcinoma: a case report and literature review. British Journal of Medicine and Medical Research, 3(4): 2299-2305, October 2013
- Riaz K, Tunio MA, Al Asiri M, Elbagir Mohammad AA, Fareed MM. Renal Cell Carcinoma Metastatic to Thyroid Gland presenting like Anaplastic Carcinoma of Thyroid. Case reports in Urology, April 2013
- Tunio MA, Asiri MA, Bayoumi Y, Fareed M, Ahmad S. Thyroid Gland as an initial site of delayed metastasis from Renal Cell Carcinoma: A Case Report. Journal of solid cancers, August 2012; Vol 2, No.4
- Tunio MA, Asiri MA, Bayoumi Y, Fareed M, Ahmad S. Cervical Lymph Node Metastasis from Transitional Cell Carcinoma of Urinary Bladder: Case report and Review of Literature. Journal of solid tumors; June 2012: 2 (3): 59-62
- Fareed MM, Al Amro AS, Akasha R, Al Assiry M, Al Asiri M, Tonio M, Bayoumi Y. Parapharyngeal Space Hemangiopericytoma Treated with Surgery and Postoperative Radiation- a case report. Head & Neck Oncology 2012 Apr 5; 4:10
- Tunio MA, Asiri MA, Ahmad S, **Fareed M,** Bayoumi Y. Tongue metastasis as an initial manifestation of metastasis in renal cell carcinoma. Journal of solid tumors; April 2012: 2 (2): 39-42
- Tunio MA, Ahmad S, **Fareed M**, Asiri MA. Sunitinib Induced Thrombocytopenia in Patient with Metastatic Renal Cell Carcinoma. Journal of solid tumors Oct 2011, Vol.1, No.2: 80-82
- Fareed MM, Memon MA, Rashid A, Furrukh M, Ahmed S, Ghouri AR, Khan A. Follicular Dendritic Cell Sarcoma of The Neck with Pulmonary Metastases. J Coll Physicians Surg Pak. 2011 Sep, Vol. 21 (9): 561-563
- Majeed U, Jamshed A, Hameed S, Shah MA, Anwar N, Ahmed Q, **Fareed M**. Invasive carcinoma of uterine cervix in young females under 20 years. J Obstet Gynaecol. April 2009: 29 (3): 269-70

Reviews and Meta-analysis

- **Fareed MM,** Hameed MY, Samuel E. Radiation Oncology Health Disparities in Pakistan. JCO Glob Oncol 2023 Sep:9:e2300199. doi: 10.1200/GO.23.00199
- Fareed MM, Galloway TJ, Time abides long enough for those who make use of it. Cancers of the Head & Neck 2018; 3:11
- Fareed MM, Krishnan M, Balboni TA, Yu HHM. Indications, barriers and paths to advancement in palliative radiation oncology. Appl Rad Oncol. 2018;7(2):18-25
- Fareed MM, Ishtiaq, R. & Galloway, T.J. Testing the Timing: Time Factor in Radiation Treatment for Head and Neck Cancers. Curr. Treat. Options in Oncol. (2018) 19: 17
- Tunio MA, Asiri MA, Al Amro A, Bayoumi Y, **Fareed MM**. Optimal Prophylactic and Definitive Therapy for Bicalutamide-induced Gynecomastia: Results of a Meta-Analysis. Curr Oncol, August 2012; 19(4): 280-288

Abstracts

- MM Fareed, PM Shaikh, SM Raza, M Abubakar, N Amjad, A Afzal, H Fatima, M Mughal, DA Clump Clinical Outcomes of Chemoradiotherapy Using Volumetric Modulated Arc Therapy (VMAT) for Locally Advanced Esophageal Cancer: A Single Institute Experience. International Journal of Radiation Oncology, Biology, Physics 120 (2), e442. Oct 2024
- M. P. Shaikh, John. A. Vargo, Muhammad M. Fareed, M. T. Khasawneh, D.A. Clump, F. Alite, M. J. Wu, T. Altoos N. Markovic, Matthew M. Harkenrider, and G. M. Jacobson. Hypofractionated vs. Conventionally Fractionated Radiotherapy for Prostate Cancer: A Meta-analysis of Randomized Trials. International Journal of Radiation Oncology, Biology, Physics 120 (2), e582-e583. Oct 2024
- PM Shaikh, **Muhammad M. Fareed**, MT Khasawneh, F Alite, DA Clump, JAA Vargo, S Singh, KK Kamali, GM Jacobson. Prophylaxis for Treatment-Induced Gynecomastia in Prostate Cancer Patients: A Network Meta-Analysis. International Journal of Radiation Oncology, Biology, Physics 117 (2), e436. Oct 2023
- Jie Jane Chen, Adam Sullivan, Diana Shi, Monica Krishnan, Lauren Hertan, Claudia Roldan, Mai Anh Huynh, Alexander Spektor, M. Mohsin Fareed, Tai Chung Lam, Tracy Balboni. Characteristics and Predictors of Local Failure in Patients with Spine Metastases Treated with Palliative Conventional Radiotherapy. Accepted for oral presentation at ASTRO'S 61st Annual Meeting September 15-18, 2019 in Chicago, Illinois.
- Apkon DJ, Krishnan MS, Abdia Y, Hertan LM, Fareed MM, Huynh M, Parker GM, and Balboni TA.
 Analysis of psychosocial and spiritual concerns in patients consulted for palliative radiation therapy.
 Journal of Clinical Oncology 36, no. 34_suppl (December 1, 2018) 157-157
- A. Eldib, **M. Fareed**, L.M. Jin, J. Fan, M. Sherif, R.A. Price Jr., C.M.C. Ma. A Dosimetric Study of a Novel Rotating Gamma Ray System for Stereotactic Body Radiation Therapy. Int J Radiat Oncol Biol Phys. Oct 2017 Volume 99, Issue 2, E147
- A Eldib, M Fareed, J Fan, J Li, L Chen, M Sherif, MA Gawad, C Ma. Investigating Beneficial Capabilities Achievable by a Rotating Gamma Ray System in Stereotactic Body Radiation Therapy. MEDICAL PHYSICS 44 (6), 2971-2971, 06/2017
- Fareed MM, Eldib Ahmed, Weiss Stephanie, Hayes Shelly B, Ma Charlie. A Treatment Planning Comparison Between Novel Cobalt-60 With a Ring Type Gantry and Robotic Linear Accelerator Based Stereotactic Radiosurgery / Radiotherapy for Brain Metastases. Int J Radiat Oncol Biol Phys. June 2017 Volume 98, Issue 2, E42
- D. Isrow, M. M Shah, M. Fareed, M. Ajlouni, K.J. Levin, S. Ryu, N. Wen, and F. Siddiqui. Single Institution Experience with Stereotactic Body Radiation Therapy for Adrenal Metastases. Int J Radiat Oncol Biol Phys. 1/2015; 93(3):E474-E475. DOI: 10.1016/j.ijrobp.2015.07.1759
- C.T. Murphy, M. Dziemainowicz, T. Shaikh, M. Fareed, J.A. Ridge, R. Mehra, and T.J. Galloway.
 Patterns of Failure After Definitive Radiation for Oropharyngeal Cancer- Should P16 Status and
 Tumor Growth Rate Alter the Clinical Target Volume? Int J Radiat Oncol Biol Phys. 2016;94(4) 875

Front Cover

• **Fareed M**, Siddiqui F. Cerebral metastasis in Parotid Adenocarcinoma. Practical Radiation Oncology, 4 (5): September–October 2014

Invited Speaker

- SBRT for renal cancers- Emerging standard of care: 4th Annual West Virginia Urologic Association Conference, Roanoke, WV on July 13, 2024
- Extreme hypofractionation in brain metastases: ONCO 23 conference by Pakistan Society of Clinical Oncology (PSCO) Feb 24-26, 2023
- Palliative Radiation Oncology Scope in Pakistan. Nishtar Medical University, Multan, Pakistan on August 24, 2019
- Palliative Radiation Oncology: Scope in Pakistan. Harvard Global Health Catalyst, May 26, 2019, at Dana Farber Cancer Institute, Harvard Medical School, Boston, MA

Oral Presentations

- SBRT for Oligometastatic Breast Cancer in Pakistan. September 09, 2021, at 19th Annual Conference of the Women's Cancer Initiative Tata Memorial Hospital, Mumbai, India.
- Fighting old war with a new weapon: Palliative Radiation and SBRT. January 25, 2021, at Shaukat Khanum Memorial Cancer Hospital & Research Center, Lahore, Pakistan.
- Pain as a Reason and Presentation among Urgent Palliative Radiation Oncology Consultations.
 Medicine and Faithful Responses to Suffering, March 29-31, 2019, at Durham, North Carolina, USA
- Good Death: Perspective of Muslim Patients and Health Care Providers Perspectives. Examining the Foundations of Medicine and Religion, April 13-15, 2018, presented in St. Louis, MO, USA
- Linear Accelerator Based Stereotactic Radiosurgery for Intracranial Arteriovenous Malformations-Single institutional experience from Saudi Arabia. World Biotechnology Congress 2013 in Boston, MA, USA June 4, 2013
- Intracavitary Brachytherapy in Carcinoma Cervix. CME Meeting at Shaukat Khanum Memorial Cancer Hospital & Research Centre, June 2008, Lahore, Pakistan.
- Hormone Refractory Prostate Cancer. CME Meeting at Shaukat Khanum Memorial Cancer Hospital & Research Centre, May 2007, Lahore, Pakistan
- Nausea and Vomiting in Oncology- State of the art lecture. Novartis Onco-Summit December 2006 at Bhurban, Pakistan.
- Preoperative Multimodality Therapy for Rectal Cancer in Pakistan. MRSP (Medical Research Society of Pakistan) 17th Annual Meeting Nov.18, 2006 held at Ayub Medical College, Abbottabad, Pakistan.

Poster Presentations

- Cody R. Kilar, Matthew Trotta, J. Christopher Knoth, Ramon Alfred Siochi, David A. Clump and Muhammad Fareed. Correlation of Prostate-specific Antigen Kinetics with Acute Toxicity Following Stereotactic Body Radiotherapy: A Single Institution Review: Accepted for presentation at American College of Radiation Oncology (ACRO) Summit at Las Vegas, Nevada, USA in March 2025
- Parvez Shaikh, Muhammad Fareed, Mohammad Khasawneh, Fiori Alite, David Clump, John Austin Vargo, Sarah Singh, Khawja Kamali, Geraldine Jacobson. Prophylaxis for Treatment-Induced Gynecomastia in Prostate Cancer Patients: A Network Meta-Analysis, 2023 Annual ASTRO Meeting October 1 – 4, 2023 San Diego, USA

- Lubna A. Hammoudeh, M Mohsin Fareed, Mai Anh Huynh, Alexander Spektor, Tracy Balboni, Monica Krishnan, Jonathan D. Shoenfeld. Patient reported pain improvement following palliative radiotherapy and immune checkpoint blockade. Poster presentation at ASTRO 2020 in Miami, FL
- Radiotherapy and limb sparing surgery in the management of localized soft tissue sarcomas: Tertiary care center experience from Pakistan. Poster presentation at Shaukat Khanum Cancer Symposium 2020, Lahore.
- Radiotherapy techniques and associated toxicity of localized extremity soft tissue sarcomas at comprehensive cancer center in Pakistan, Poster presentation at Shaukat Khanum Cancer Symposium 2020, Lahore.
- Palliative Radiation Therapy for Vertebral Metastases and Metastatic Cord Compression in Patients
 Treated with anti-PD-1 Therapy. ASTRO 2018 Annual Meeting Oct 21 24, 2018, San Antonio, TX
- Impact of Primary Tumor Specific Growth Rate on Treatment Failure for Non-Oropharyngeal Head and Neck Cancers. Presented at ASTRO 2016 Annual Meeting, Boston (Sept 25-28), MA
- Intensity-Modulated Radiotherapy with Simultaneous Modulated Accelerated Boost Technique in Patients with Nasopharyngeal Carcinoma- King Fahad Medical City Experience. Presented at ASTRO 54th annual meeting Boston, MA, USA (Oct 28-30, 2012)
- Acute Toxicity and Response to Concomitant Hypofractionated Accelerated Radiotherapy and Chemotherapy in Oral Cancer. Presented at ESTRO-27 at Goteborg, Sweden (Sept.14-18, 2008)
- Organ Preservation with Concomitant Chemoradiation (CRT) in Locally Advanced Laryngeal Cancer. Presented at ESTRO-27 at Goteborg, Sweden (Sept.14-18, 2008)
- Neoadjuvant Gemcitabine Cisplatin (GC) Followed by Concomitant Cisplatin and Hypofractionated Accelerated Radiotherapy in the treatment of advanced Head and Neck Cancer. Presented at 13th Annual Cancer Congress, Karachi, Pakistan, January 2007
- Is Tumour Thickness a Predictor of Cervical Node Metastasis in Squamous Cell Carcinoma Tongue? Presented at 13th Annual Cancer Congress, Karachi, Pakistan, January 2007
- Preoperative Chemoradiation (CRT) for Locally Advanced Rectal Cancer. Presented at 13th Annual Cancer Congress, Karachi, Pakistan, January 2007
- Pathological Patterns of Cervical Lymph Node Metastasis at presentation in Early (T1/2) Oral Tongue Cancers. Presented at MRSP (Medical Research Society of Pakistan) 17th Annual Meeting Nov.18, 2006 held at Ayub Medical College, Abbottabad, Pakistan
- Impact of Overall Radiotherapy Treatment Time on Local Control after Concurrent Chemoradiation (CRT) For T3/4 Glottic Carcinoma. Presented at 7th Asian Society of Clinical Oncology annual meeting, Beijing 14 – 17 September 2006

Clinical Activities and Expertise:

- Genitourinary malignancies
- Gastrointestinal malignancies
- CNS malignancies
- Breast cancer
- Sarcoma
- Pediatric malignancies
- Brain SRS/SRT
- SBRT spine, bone, liver, and lung

Technical Experience:

- Stereotactic Body Radiation Therapy (SBRT) and Stereotactic Radiosurgery (SRS): CyberKnife and LINAC-Based
- Gamma-knife radiosurgery (Authorized User)
- Electronic Medical Record with ARIA, MOSAIC, Cerner Power Chart, PACS
- External Beam Radiation Therapy (EBRT), 3D- Conformal and IMRT
- IGRT (Calypso, CT-on-Rails, Cone-Beam CT)
- Rapid Arc: Volumetric Modulated Arc Therapy (VMAT)
- Brachytherapy
 - A. HDR: GYN, Prostate
 - B. LDR: GYN
- CT Simulation
- Helical and 4D CT, MRI, and PET Simulation
- Contouring / Treatment Planning Systems
 - A. Velocity, MIMS, Eclipse, Multiplan, Focal/XiO, BrainLab, VariSeed
- DIBH breast irradiation
- Radiopharmaceuticals
 - B. SIR-Spheres, Iodine-131, Radium 223
- MR-Guided High Intensity Focused Ultrasound (HIFU)