Description of Research Experience

1. Genetics Laboratory Training

During my tenure at the Sarin Cancer Genetics Lab (ACTREC, Navi Mumbai, India), I gained hands-on experience with key molecular biology techniques, including DNA extraction, Polymerase Chain Reaction (PCR), agarose gel electrophoresis, and restriction fragment length polymorphism (RFLP). I also did my MD Dissertation on the 'Association of Vitamin D Receptor Polymorphisms with risk of developing bone metastases in patients with Breast Cancer'.

2. Protocol Development and Leadership in Clinical Research

I have been actively involved in designing and leading clinical research projects. Notable achievements include:

Principal Investigator of an IEC-approved Phase III randomized controlled trial: A Phase III Randomized Controlled Trial Evaluating Toxicity and Quality of Life between a Short Course of Hypofractionated versus Conventionally Fractionated Chemoradiation for Locally Advanced Unresectable Oral Cancers.

Selected for the CREDO Protocol Development Workshop, which helped me conceptualise and execute independent research studies.

I am also initiating a study on photobiomodulation therapy to reduce oral mucositis in head and neck cancer patients, showcasing my interest in translational research aimed at improving patient outcomes.

3. Quality Improvement Initiatives

I served as the Team Leader for EQuIP (Quality Improvement Program), a collaboration between Stanford University and the National Cancer Grid, India. This initiative allowed me to streamline clinical workflows and enhance the quality of care in radiation oncology.

4. International Training and Expertise

I participated in the International Atomic Energy Agency's Virtual Regional Training Course on Hypofractionated Radiotherapy, deepening my knowledge of advanced radiotherapy techniques and their clinical applications.

5. Research Topics and Publications

My research interests focus on advancing radiation oncology techniques, improving treatment outcomes, and addressing critical challenges such as toxicity and treatment compliance. Key publications highlight areas like adaptive radiotherapy, artificial intelligence, radiomics, and innovative therapeutic strategies, reflecting impactful research.