We are seeking a highly motivated candidate, interested in clinical trial design, for a position as a postdoctoral fellow. This position will focus on developing novel designs for adaptive clinical trials in oncology based on machine learning algorithms. Patient-level data on biomarkers and treatment responses extracted from past oncology trials will be used to train predictive algorithms for the outcomes of patients enrolled in a new study. Validated predictions will be used to implement sequential decision rules that may change the study conduct—e.g. stopping enrollment of patients from subgroups where the experimental therapy is unlikely to provide a benefit.

The successful applicant will be supervised jointly by Dr. Andrea Arfè and Dr. Mithat Gonen. The applicant will also collaborate with medical researchers in oncology.

Applicants should hold a PhD degree in biostatistics, statistics, machine learning or a related field. The successful candidate should have solid methodological training in statistics, be comfortable developing simulations, and be proficient in R. Interest or expertise in Bayesian methods and/or reinforcement learning is preferred but not required.

To apply, send a cover letter, CV, and the names of 3 references to Jovana Olaizola, olaizolj@mskcc.org: Memorial Sloan Kettering Cancer Center, 485 Lexington Avenue, New York, NY 10017.