Communication and Education in Tumor Profiling: A Randomized Study of Pre-disclosure Genetic Education v. Usual Care in Tumor Profiling for Advanced Cancer and a Pilot Study of Remote Genetic Counseling for Participants with Potential Germline Mutations Identified on Tumor Profiling

Overall COMET/EAQ152 Study Objective
To address the need for empirical studies to evaluate how to best communicate and deliver cancer genetic education and counseling in the setting of tumor profiling

Study Objectives

Primary Objective
- Primary Intervention Study—Randomized Clinical Trial (RCT) (Step 1): Evaluate efficacy of Web-based predisclosure genetic education before receipt of tumor profile results to
  - Increase genetic knowledge and determine knowledge of test benefits and limitations
  - Decrease distress, such as anxiety, depression, and cancer-specific worry, compared to usual care services in patients undergoing tumor profiling for advanced cancer
- Secondary Genetic Counseling Substudy (Step 2): Evaluate uptake of remote genetic counseling and germline testing in advanced cancer patients with potential clinically significant incidental germline mutation identified through tumor profiling

(Continued)
Study Objectives (cont)

Secondary Objectives

- Primary Intervention Study RCT (Step 1): Evaluate potential moderators suggested by self-regulation theory of health behavior (SRTHB) (e.g., test result, sociodemographic factors, health literacy, baseline knowledge or distress) to changes in
  - Knowledge of genetic disease and test benefits and limitations
  - Distress in patients undergoing tumor profiling for advanced cancer
- Secondary Genetic Counseling Substudy (Step 2): Evaluate the following:
  - Factors associated with uptake of genetic counseling and germline testing
  - Cognitive and affective responses to confirmatory germline testing in advanced cancer patients with potential clinically significant incidental germline mutation identified in tumor profiling

Exploratory Objectives

- Primary Intervention Study RCT (Step 1): Explore the following:
  - Satisfaction and regret/disappointment related to tumor genetic test results
  - How to better deliver tumor genetic test results and germline information in the future
- Secondary Genetic Counseling Substudy (Step 2): Explore the following:
  - Behavioral responses (communication to others) to confirmatory germline testing in advanced cancer patients with potential clinically significant incidental germline mutation identified in tumor profiling
  - Satisfaction and regret/disappointment related to genetic counseling service or germline test results

Eligibility Criteria*

- Step 1—Primary Intervention Study (RCT)
  - Registered to the first screening step (step 0) for the NCI-MATCH trial or must be having tumor profiling for advanced cancer performed at or ordered by one of the expansion sites (see Section 4.1.4.5 for full list)
  - Must speak English
  - Must have Web and e-mail access
  - Must not have received MATCH tumor profile results. Non-MATCH expansion site patients must have not received tumor profile genetic results to participate

- Step 2—Secondary Genetic Counseling Substudy
  - Notes: Only available to patients from select participating sites (see Section 4.2.3.2 for instructions and requirements)
    - Patients must meet eligibility requirements in RCT, except patients need not have e-mail and Web access, and will have received their MATCH tumor genetic test results
  - Non-MATCH expansion site patients must have participated in COMET step 1 to be eligible for step 2

*When evaluating patients for this study, please refer to the full protocol for the complete list of eligibility criteria.
COMET/EAQ152

Eligibility Criteria (cont)

- Patients must have a potential germline mutation, as determined by NCI-MATCH tumor profiling assay or other clinical lab, and must meet one of the following criteria:
  - Tumor contains one of the following genetic variants: BRCA1, BRCA2, MLH1, MSH2, TSC1, TSC2, VHL, CDH1, CDKN2A
  - APC mutation and not colon cancer
  - APC mutation, colon cancer, and history of polyposis
  - PTEN mutation and not uterine cancer
  - TP53 mutation and either personal history of breast cancer diagnosed at age ≤ 65 or personal history of any other cancer diagnosed at age ≤ 40
  - RB1 mutation with personal and/or family history of retinoblastoma (RB) or other associated RB tumor (eg, soft tissue, sarcoma, melanoma, PNET)
  - RET mutation with personal history of medullary thyroid cancer and/or family history of thyroid cancer
  - TSC1/TSC2, CDKN2A, STK11, and VHL require additional internal vetting by genetic counseling team
  - Must be able to speak English and hear by phone