Appendix 6. Secondary Criteria

Secondary Criteria for Tumor Selection Ranking

Criterion	Description	Value	Sample Collection Answer	Sample Collection Points	Tumor Collection Answer	Tumor Collection Points	Comments
Protocol/Trial/Enrollment							
If donors are/were in, or directed into, a therapeutic trial, how many drug treatment arms are in the trial?	Fewer is better in terms of sample biochemical variance.	1 arm = 5 points 2 arms = 3 points 3 arms = 1 point	1	5			
Do different arms of the trial have the same standardized and documented surgical treatment protocol?	Fewer is better in terms of sample format and tissue content variance.	Yes = 10 points	Yes	10			
If the protocol is closed, what was the date of closure?	Older protocols are more likely to have longitudinal and outcome data by now. (Enter protocol closed date.)	Every year = 2 points	1/1/2000	12			
If the protocol is still open:							
At what rate are donors continuing to be enrolled?	Creates option for more accrual	≥ 200/yr = 5 points 100 - 199/yr = 3 points ≤ 99/yr = 1 point					
Will the protocol be closed by June 2007 and, if applicable, be unblinded at the same time?	Unblinded (i.e. ability to correlate case vs. control to molecular profile) is required for correlative studies at pilot's close.	Yes = 5 points	Yes	5			
What fraction of the patients has NOT been lost to followup?	Better retention yields greater opportunity for correlating outcomes with molecular profile. Sliding scale to 0.	100% = 20 points	80%	16			
What is the mean length of followup (number of years)?		5 yrs - Lifelong = 5 points 3 - <5 yrs = 3 points					
Is/was a single specific clinical or pathologic stage one of the inclusion criteria?		Yes = 5 points	Yes	5			
Was/is absence of prior therapy for the current cancer a criterion for entry into this trial?		Yes = 10 points	Yes	10			

Criterion	Description	Value	Sample Collection Answer	Sample Collection Points	Tumor Collection Answer	Tumor Collection Points	Comments
Informed Consent/Permissible Use/Authorization							
Does the source institution already have in place a process for patient recontact and reconsent?		Yes = 10 points		0			
How many different IRBs will be required to approve the reconsent process or sample/data transfer to TCGA?		1 = 5 points 2 or more = points					
How many different merit review committees will be required to review and approve the sample/data transfer to TCGA?		1 = 5 points 2 or more = 0 points					
Did the institution specifically obtain a HIPAA-defined “authorization” for use of patient PHI in research?		Yes = 5 points	Yes	5			
Does the current informed consent permit DNA genotyping?		Yes = 2 points		0			
Does the current informed consent specifically permit DNA sequencing?		Yes = 2 points		0			
Contractual Status/MTA							
Has the donor institution already transferred samples from this biorepository to another third-party site?		Yes = 2 points		0			
Has the donor institution waived, or is it willing to waive, IP rights in data generated by TCGA from its samples?		Yes = 5 points		0			

Criterion	Description	Value	Sample Collection Answer	Sample Collection Points	Tumor Collection Answer	Tumor Collection Points	Comments
Clinical Data Quality							
What is the frequency (in years) of data quality audits?		Yearly = 5 points Every 2 years = 3 points		0			
Does the annotation include standard demographic data: DOB, gender, race/ethnicity, occupation, and locale?		Yes = 1 point	Yes	1			
Does the trial CRF specifically attempt to collect annotation on any drug therapy prior to biospecimen collection?		Yes = 10 points		0			
Does the annotation include anatomic pathology reports on the tumor from which the research biospecimen was taken?		Yes = 5 point		0			
Is that annotation in CAP (College of American Pathologists) synoptic/checklist reporting format?		Yes = 2 points		0			
With digital images?		Yes = 2 points		0			
Clinical Data Electronic Status/Standards							
Do the data exist in electronic format (not including images of paper records)?		Yes = 10 points		0			
Are the data in a relational database system?		Yes = 10 points		0			
If so, is the data collection and management system validated as 21-CFR-11 compliant from a software technical perspective?		Yes = 10 points		0			
If not, are the data in an electronic grid/spreadsheet format?		Yes = 4 points		0			
Are the data characterized using caBIG Common Data Elements resident in caDSR?		Yes = 10 points		0			
Have the clinical data been specifically modified, or has the data access system been designed with specific functionality to prevent access to direct identifiers (such as name, SS#, MR#, phone number, etc.)?		Yes = 5 points	Yes	5			
Have the clinical data been specifically modified, or has the data access system been designed with specific functionality to permit export of clinical information compliant with HIPAA “de-identified” (i.e., non-PHI) or “limited data set” standards?		Yes = 5 points	Yes	5			

Criterion	Description	Value	Sample Collection Answer	Sample Collection Points	Tumor Collection Answer	Tumor Collection Points	Comments
Donor/Sample Characteristics							
How many clinical stages do the enrolled donors represent?	Fewer is better.	1 stage = 10 points 2 stages = 3 points	1	10			
How many histopathologic grades do the tumor samples represent?	Sliding scale down to 0 points.	1 grade = 10 points	1	10			
What fraction of the tumors is primary versus a metastasis?	Sliding scale down to 0 points.	100% = 50 points	85%	43			
What fraction of the tumors comes from patients known not to have had a previous cancer?	Sliding scale down to 0 points.	100% = 10 points	85%	9			
If lack of prior therapy is NOT an enrollment criterion, what fraction of the tumor samples was acquired prior to disease-specific therapy (i.e., are the tumor samples chemo-, immuno-, hormonal, radiation, and alternative therapy naive)?	Sliding scale down to 0 points.	100% = 50 points	100%	50			
From the clinical surgical pathology report (i.e., not derived from review of the actual research biospecimen):							
If known, what fraction of the tumor samples contains less than 5% viable non-tumor cells?		100% = 5 points	85%	4			
If known, what fraction of the tumor samples contain <10% extracellular matrix?		100% = 5 points	85%	4			
What is the source of “normal” tissue case-matched with each tumor sample?		Blood = 10 points Adjacent tissue = 15 points Both = 30 points	Both	30			

Criterion	Description	Value	Sample Collection Answer	Sample Collection Points	Tumor Collection Answer	Tumor Collection Points	Comments
Sample Collection Protocol							
Are **all** the biospecimens in this collection obtained and processed in the same institution at which the biorepository is housed?		Yes = 25 points	Yes	25			
If not, is **at least one** of the collection and processing protocols in the same institution at which the biorepository is housed?		Yes = 15 points	Yes	15			
Did the sample collection protocol begin with activities in the OR, or did it begin upon gross biospecimen receipt in pathology?		OR = 5 points					
Are the technical aspects of the surgical protocol (from which the tumor is obtained) standardized?		Yes = 10 points	Yes	10			
Were the samples collected, processed, and stabilized according to a single written SOP?		Yes = 10 points	Yes	10			
Have the laboratories and processes in which collection occurred been validated as GLP?		Yes = 15 points	Yes	15			
Are the following key sample collection process variables collected:							
In vivo clamp time?		Yes = 5 points	Yes	5			
Warm ex vivo ischemia time?		Yes = 5 points	Yes	5			
Collection to stabilization time?		Yes = 5 points	Yes	5			
Freezing/fixation time?		Yes = 5 points	Yes	5			
For hematologic cancers, is/was the “normal” blood sample collected posttreatment and tested for detectable cancer cells?		Yes = 10 points	Yes	10			

Criterion	Description	Value	Sample Collection Answer	Sample Collection Points	Tumor Collection Answer	Tumor Collection Points	Comments
Sample Storage							
Have the OCT or blood or blood component samples been stored at -86 °C or liquid nitrogen?		lN_2 = 5 points -86 = 3 points					
Has the storage temperature been monitored and logged for life of sample storage?		Yes = 5 points	Yes	2			
Have the samples been accessed more than once since stabilization for any process that included warming? MORE-10		No = 5 points	Yes	0			
Are blood (component) samples stored as frozen whole blood, frozen separated PBLs, or frozen separated viable PBLs in DMSO (or equivalent)?		Whole blood = 0 points Separated = 5 points Viable PBL = 10 points					
Are all the samples labeled (or tagged) with a machine-readable unique identifier (e.g., barcode, RFID)?		Yes = 15 points					
Research Sample QC							
What fraction of the actual research samples has undergone pathology QC (i.e., sectioning, H&E stain, etc.)?	Sliding scale down to 0 points.	100% = 25 points	100%	25			
If performed:							
If known, what fraction of the research samples is greater than 80% viable tumor cells?		100% = 20 points	85%	17			
If known, what fraction of the research samples contains less than 5% viable nontumor cells?		100% = 5 points	85%	4			
If known, what fraction of the research samples contains <10% extracellular matrix?		100% = 5 points	85%	4			
Was a (semi-)quantitative value for necrotic composition captured?		Yes = 5 points	Yes	5			
Were representative digital images captured?		Yes = 5 points	Yes	5			
If >10% of the research samples have been extracted into RNA, for what fraction was the 18S/28S ratio determined to be greater than 1.5?	Sliding scale down to 0 points.	100% = 15 points	75%	11			