Assessment of Advantages and Challenges of Biorepository Types

The Final Report listed the advantages and challenges of the various biorepositories as follows:

RTR Key Advantages: Ability to provide specimens from a population based sampling frame, use of specimens that would otherwise be destroyed, rapid access to the specimens compared to the status quo, and, access to large numbers of rare tumors in a central location. Because tissues would not have to be withheld for clinical reasons, an RTR is likely to provide the best population based sample. Even a small RTR could be justified for its ability to conduct population based studies of common tumor types.

RTR Key Challenges: Funding, staffing and maintenance. For studies that do not require a population based sample, it will take the RTR several years of collecting tissues – and at least 1 million dollars – before its tissue collection will be large enough to be a logical alternative to obtaining tissue from the 10+ year archive at one or a small number of large hospitals.

ATA Key Advantages: Ability to provide specimens from a population-based sampling frame without the costs associated with an actual physical facility, use of specimens prior to the ten year regulatory limit for disposal, rapid access to specimens compared to an RTR. It can also serve as the basis for quantifying the demand for tissue prior to establishing a physical statewide repository.

ATA Key Challenges: Uncertain if a universal agreement can be reached with hospitals. Arriving at a Master Agreement may take one year or longer, and it is uncertain what barriers to participation may be encountered at various hospitals. Archived specimens from patients diagnosed ten years or later may not be available anymore due to minimum state retention requirements. Tissue must be obtained from multiple sites for each study, slowing progress unless the clearance and collection processes can be streamlined.

CSR Key Advantages: Analytic procedures for genomic and proteinomic analysis were typically developed using fresh or cryopreserved tissues, such that the standard assays are optimized for these specimens.

CSR Key Challenges: Primary challenges are the personnel costs for obtaining specimens, cryopreserving and maintaining cryopreserved specimens long term, as well as limitations in the proportion of tumors from which specimens may be obtained after clinical needs are satisfied.