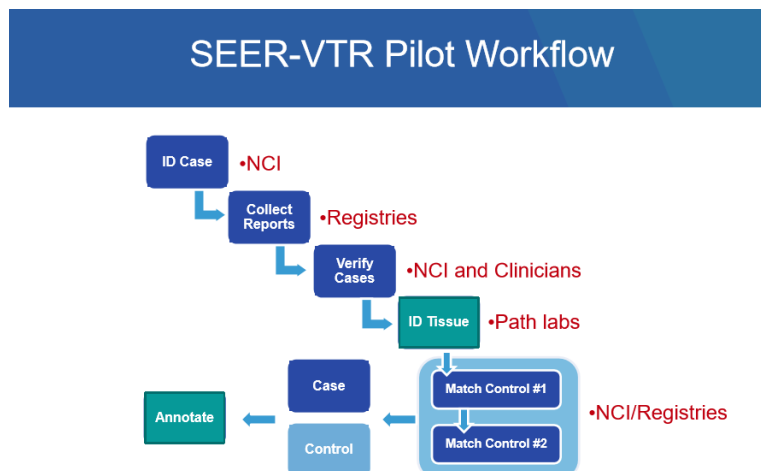




Virtual Tissue Repository Overview

- Definitions
 - Residual Tissue Repository (RTR) Program – tissue samples are stored by the cancer registry
 - The retention requirements for all tissues are lifted after 10 years. Pathology labs usually discard the samples at that time. With a RTR, the samples are transferred to and preserved by the cancer registry instead of being destroyed.
 - Samples are 10+ years old and are cheaper than more recent samples.
 - Virtual Tissue Repository (VTR) – tissue samples are stored by pathology facilities across a cancer registry's catchment area
 - Samples are fresher, but can be more expensive
- NCI SEER Residual Tissue Repository Program
 - Established in 2003 with three participating registries: HI, IA and Los Angeles. These registries also have VTRs.
 - Most samples are formalin-fixed paraffin-embedded tissue block, although some use pancreatic tissue microarrays.
 - All three registries require IRB approval to access RTR and VTR samples.
 - At least two of the three programs charge for using samples. For example, IA charges a minimum of \$50 per case, but cost can vary depending on project.
- NCI SEER Virtual Tissue Repository Initiative
 - SEER is in the process of establishing a VTR Program, which will enable researchers to search de-identified SEER abstracts and pathology reports to select tumors for which SEER registries can provide the sample and additional clinical data if needed.
 - Pilot study was done with seven SEER registries to determine feasibility.



- SEER is researching better de-identification tools and digital imaging software for the VTR Program.
- Task Area 8 of NCI SEER Request for Proposal Document addresses VTR.
 - Definition: a SEER VTR, with its population representativeness and large sampling frame is a unique resource for assembling robust collections of biospecimens, even for rare tumors and outcomes.



- SEER annotation includes demographic and clinical characteristics such as tumor histology, biomarker status, treatment and outcome.
- Annotation can be augmented with custom data, including detailed chemotherapy, time to recurrence, and body mass index.
- Activities that Contractor is required to participate in include:
 - Determining biospecimen availability
 - Identifying and retrieving biospecimens
 - Performing custom annotation
 - Performing pathology review of biospecimens
 - Assisting with study IRB clearance

Additional Reading

- Petkov V. SEER Virtual Tissue Repository Initiative: Current Status and Future Goals. Presented at NAACCR 2018.
- Petkov V. Update on Virtual Tissue Repository Initiative, De-identification efforts and Genomics projects. https://seer.cancer.gov/seerdms/portal/face-to-face-meetings/2017/vtr-and-de-id-projects_petkov_pw.pdf
- Piehowski PD, Petyuk VA, Sontag RL, et al. Residual tissue repositories as a resource for population-based cancer proteomic studies. *Clin Proteomics*. 2018;15:26. Published 2018 Aug 3. doi:10.1186/s12014-018-9202-4
- Altekruze SF, Rosenfeld GE, Carrick DM, et al. SEER cancer registry biospecimen research: yesterday and tomorrow. *Cancer Epidemiol Biomarkers Prev*. 2014;23(12):2681–2687. doi:10.1158/1055-9965.EPI-14-0490