

Talk Abstract

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Quality Issues for Collecting Tissues

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Today, biobanks containing human materials form an important basis of many of the ongoing health care translational research projects. In pursuit of relevant significant results, that can in the end change patient care in the field of: diagnosis, personalised medicine and identification of new drug targets; thousands of well documented and high quality samples can be needed for a conclusive experiment. In case determination of genomic correlations to traits involving many genes, this number of samples needed can easily reach hundreds of thousands. Such high numbers cannot be collected in one institute in an acceptable amount of time for research projects. Therefore, scientists need to cooperate and biobanks need to be able to exchange samples with other institutes to be used in large multi-center projects.

Exchangeability of samples means the data and the quality of the samples need to be comparable so they can be used in one experiment, otherwise it might become the cause of intrinsic bias. As a consequence, biobanks need to implement quality assurance and quality control (QA & QC) programs to enable sample exchangeability. Although most biobanks are aware of this need and implement an internal quality program. However, also external quality is an important issue to enable comparison of the internal quality with other biobanks. Do we need accreditation or certification to live up to the wanted standards? Standardisation in collection and storage methods is already difficult to implement, however, how to deal with uncontrollable items like there are in the pre-acquisition phase is quite another. In addition, quality of research cannot be neglected and needs to be performed in multi-disciplinary research teams. The European project SPIDIA focuses on those quality issues in the diagnostic process that can improve diagnostic materials to become a better resource for medical research.

Pathology is one of the most crucial departments for the acquisition of tissues and archival material. At first glance archival material seems to be treated in a standardised manner almost all over the world. Therefore, it seems to be very useful for research purposes. However, looking more closely, there seem to be

many quality issues when FFPE material is used for medical research. What effects would alternative fixatives have on the use of pathology archives as source for medical research? The presentation will cover the above mentioned quality issues and report the latest developments.