Cooperative Human Tissue Network (CHTN)
Normal Tissue Microarray: Version CHTN2002T1

Purpose: To provide researchers with an inexpensive tissue microarray of a limited number of formalin fixed paraffin embedded samples that can be used to titrate assay parameters prior to use of more comprehensive tissue microarrays.

Tissue samples: Selected to contain lymphoid, epithelial and stromal tissue: spleen (0.6 mm spots), colonic mucosa (0.6 mm spots), endometrium (0.6 mm spots), liver (2 mm spots) and smooth muscle from the uterus (2mm spots).

TMA manufacture: Each tissue type was sampled multiple times with either 0.6 mm or 2 mm needle cores. The array was serially sectioned at 4 micron thickness and placed on charged glass slides (Fisher Plus). At intervals, sections were stained and examined by a pathologist for quality assurance (QA) purposes. Each desired tissue type must be present on at least one tissue spot for the intervening sections to be scored as adequate. The number of tissue spots in which the desired tissue types resides may vary from section to section. If you are missing a target tissue type on your array sections, please contact us at (434) 924-9879 or UVA-CHTN@virginia.edu.

THE TISSUE SAMPLES HAVE BEEN ANONYMIZED, NO FURTHER DATA ON THE DONORS IS AVAILABLE OTHER THAN THAT FOUND IN THE ACCOMPANYING DATA SHEET.

Data sheets for the arrays can be downloaded in Microsoft Excel format from the CHTN website: http://faculty.virginia.edu/chtn-tma.

Frequently asked questions:

Why aren't all there as many tissue spots on my section of the array as are listed on the TMA key? The key represents the original TMA design. Tissue cores are of various lengths, hence at deeper sections, some cores have been exhausted while others remain. In addition, some tissue spots may be lost during the process of transferring the TMA section to the glass slide.

Why isn't the target tissue type present in the tissue spot? Although TMA manufacture is guided by a histologic section that represents the surface of the donor tissue, this target tissue may not be uniformly represented in the deeper sections of the tissue. This problem is greatest with small structures (e.g. breast ducts and lobules).

Can I use antigen retrieval methods (boiling, microwave, pressure cooker, etc) on these sections? Yes.

Can I perform in situ hybridization on these sections? Yes

Definitions and abbreviations:

Donor block: a tissue paraffin block (see below) that contains tissue of the desired type to be placed into the tissue microarray.

Histologic section: a flat sheet of paraffin and embedded tissue cut from a paraffin block on a microtome. The thickness of the section can vary, but a typical thickness is 4 microns (micrometers).

QA: quality assurance

Recipient block: The blank paraffin block into which tissue cores are inserted to form the tissue microarray.

Tissue core: the cylindrical tissue sample removed from the donor block, which is placed in the recipient block.

TMA: tissue microarray. A recipient paraffin block into which tissue cores have been inserted in a gridded array.

Tissue paraffin block: a sample of tissue that has been fixed in formalin, processed to remove water, then infused with molten paraffin, which is allowed to harden within and around the tissue in a square mold. This is the standard method of preparing tissue for clinical histologic analysis. The paraffin block is subsequently cut on a microtome to produce thin histologic sections which are placed on glass slides. In the manufacture of TMAs, these become the donor blocks.

Tissue spot: the tissue sample present on a histologic section of a tissue microarray that corresponds to a tissue core.