Tissue MicroArrays

The Biopathology Center, which maintains the Children's Oncology Group (COG) and the Gynecologic Oncology Group (GOG) Tissue Bank, has several tissue microarrays (TMA) available. Investigators can request slides from these arrays by completing an application, signing a Data Use Agreement and submitting their institutional IRB approval. Once the request is approved the slides will be distributed.

TMA sections are cut in batches, typically 20 to 30 sections per batch and one section per slide. The first and last cuts are hemotoxylin & eosin stained to quality control for loss of cores. The unstained tissue slides are dipped in paraffin, vacuum-sealed and stored at -10°C until distributed to approved investigators.

Pediatric TMA Tissue Type	**Number of Unique Cases**	**Number of Controls**	**Number of Blocks**
Alveolar Rhabdomyosarcoma	39	10	1
Embryonal Rhabdomyosarcoma	38	10	1
Rhabdoid Tumor (all sites)	23	9	3
Low Grade Glioma	31	5	2
Medulloblastoma	47	11	4
Ewing's Sarcoma – therapeutic	34	14	4
Ewing's Sarcoma – biology	31	14	4
Osteosarcoma - biology	42	10	1
Osteosarcoma – therapeutic	34	10	4
Clear cell sarcoma of the kidney	67	27	4
Neuroblastoma	90	20	2
Neuroblastoma	90	6	4
Wilms' tumor – Stage III	58	15	4
Wilms' tumor – all stages	59	10	4
Wilm's "tiny" tumor	38	24	4
Hodgkin's Lymphoma – AHOD0031	108	9	4
Gynecologic TMA Tissue Type	**Number of Unique Cases**	**Number of Controls**	**Number of Blocks**
Late Stage Ovarian Carcinoma	50		1
Endometrial Carcinoma	54		2
Endometrial Carcinoma	42		2
Ovarian Disease Progression	174	63	4
Ovarian Stage Progression	179	66	4
Ovarian Histologic Subtype	120	63	4

All cores are placed randomly throughout the block. Each core is 1.0 mm in diameter unless otherwise specified.

Alveolar Rhabdomyosarcoma Array
39 unique cases (1 block)
Normal Controls
10 cores of control tissue
Two types of control tissue
- Embryonal Rhabdomyosarcoma (5 cases)
- Normal Muscle (5 cases)

Embryonal Rhabdomyosarcoma Array
38 unique cases (1 block)
Normal Controls
10 cores of control tissue
Two types of control tissue
- Alveolar Rhabdomyosarcoma (5 cases)
- Normal Muscle (5 cases)

Rhabdoid Tumor Array (all sites)
23 unique cases (3 blocks)
Normal Controls
27 cores of control tissue
Three types of control tissue
- Cerebellum (3 cases)
- Kidney (3 cases)
- Tonsil (3 cases)

Low Grade Glioma Array
31 unique cases (2 blocks)
Normal Controls
20 cores of control tissue
Three types of control tissue
- Cerebellum (2 cases)
- Kidney (1 case)
- Tonsil (2 cases)

Medulloblastoma Array
47 unique cases (4 blocks)
Normal Controls
33 cores of control tissue
Control tissue is cerebellum
- 0 – 1 year of age (5 cases)
- 1 – 18 years of age (4 cases)
- >18 years of age (2 cases)

Ewing's Sarcoma Array
36 unique cases (4 blocks)
31 unique cases (4 blocks)
Normal Controls
~30 cores of control tissue
Seven types of control tissue
- Adrenal Gland (2 cases)
- Bladder (2 cases)
- Lipoma (2 cases)
- Lymph Node (2 cases)
- Skeletal Muscle (2 cases)
- Thymus (2 cases)
- Tonsil (2 cases)

Osteosarcoma Array
52 unique cases (4 blocks)
34 unique cases (4 blocks)
Normal Controls
Three types of control tissue
- Tonsil (3 cases)
- Adrenal (5 cases)
- Breast (2 cases)

Clear Cell Sarcoma of the Kidney Array
67 unique cases (4 blocks)
Normal Controls
27 cores of control tissue
Seven types of control tissue
- Kidney (3 cases)
- Placenta (3 cases)
- Rhabdoid Tumor of Kidney (3 cases)
- Embryonal Rhabdomyosarcoma (3 cases)
- Favorable Histology Wilms Tumor (8 cases)
- Cellular Congenital Mesoblastic Nephroma (3cases)
- Classic Congenital Mesoblastic Nephroma (3 cases)

Neuroblastoma Array
90 unique cases (2 duplicate blocks)
Each core is 0.6 mm in diameter
Cancer Cases
- Neuroblastoma Stage I (16 cases)
- Neuroblastoma Stage II (16 cases)
- Neuroblastoma Stage III (15 cases)
- Neuroblastoma Stage IV (29 cases)
- Neuroblastoma Stage IVs (15 cases)

Normal Controls
20 cores of control tissue
Two types of control tissue:
- Ganglioneuromas (3 cases)
- Tonsil (3 cases)

Wilms' Tumor Array
58 unique cases (4 blocks)
23 unique cases (4 blocks)
Normal Controls
~15 cores of control tissue
Eight types of control tissue
- Rhabdoid Tumor of Kidney (2 cases)
- Clear Cell Sarcoma of Kidney (2 cases)
- Congenital Mesoblastic Nephroma (2 cases)
- Rhabdomyosarcoma (2 cases)
- Non-Rhabdomyosarcoma Soft Tissue Sarcoma (2 cases)
- Normal Kidney (2 cases)
- Fetal Kidney (1 case)
- Normal Placenta (2 cases)

Wilm's – Tiny Tumor Array
38 unique cases (4 blocks)
Normal Controls
24 cores of control tissue
Eight types of control tissue
- CMN classic
- CMN cellular
- Clear Cell Sarcoma of the Kidney
- Embryonal Rhabdomyosaroma
- Normal Kidney

- Placenta (2 cases)
- PLNR
- Rabdoid Tumor of the Kidney

Hodkin's Lymhoma
108 unique cases (4 blocks)
Normal Controls
- Normal tonsil (3 case)
- Infected tonsil (3 cases)
- Normal Tumor (3 cases)

Congenital Mesoblastic Nephroma
67 unique cases (4 blocks)
Normal Controls
- Normal kidney (1 case)
- Wilms (2 cases)
- Rhabdoid Tumor (1 case)
- CCSK (1 case)
- Placenta (1 case)
- Embyronal Rhabdomyosarcoma (1 case)

Late Stage Ovarian Carcinoma
50 unique cases (1 block)
Cancer Cases
- Stage III and Stage IV ovarian cancer
- Serous Adenocarcinoma
- Endometrioid Adenocarcinoma
- Clear Cell Carcinoma
- Mucinous Carcinoma

Normal Controls
- Normal Ovary

Endometrial Carcinoma
54 unique cases (2 duplicate blocks)
42 unique cases (2 duplicate blocks)
*linked to clinical outcome and treatment data
Cancer Cases
- Endometrial cancer, advanced
- Endometrial cancer, recurrent
- Endometrial cancer, Metastatic
- Endometrial carcinomas

Normal Controls
- Kidney (3 cases)
- Tonsil (3 cases)
- Brain (3 cases)
- Normal Endometrium (7 cases)

Ovarian Disease Progression
174 unique cases (4 duplicate blocks)
Each core is 0.6 mm in diameter

Cancer Cases

- Mucinous Carcinomas (30 cases)
- Clear Cell Carcinomas (30 cases)
- Primary Peritoneal Carcinomas (12 cases)
- Mucinous Low Malignant Potential (30 cases)
- Serous Low Malignant Potential (30 cases)
- Mucinous Benign (30 cases)
- Serous Benign (12 cases)

Normal Controls

63 cores of control tissue

Seven types of control tissue

- Placenta
- Testis
- Kidney
- Colon
- Endometrium
- Ovarian Surface Epithelium
- Endocervix

Ovarian Stage Progression

179 unique cases (4 duplicate blocks)

Each core is 0.6 mm in diameter

Cancer Cases

- Serous Adenocarcinoma, Stage I (15 cases)
- Serous Adenocarcinoma, Stage II (23 cases)
- Serous Adenocarcinoma, Stage III (29 cases)
- Serous Adenocarcinoma, Stage IV (30 cases)
- Endometrioid Adenocarcinoma, Stage I (27 cases)
- Endometrioid Adenocarcinoma, Stage II (12 cases)
- Endometrioid Adenocarcinoma, Stage III (29 cases)
- Endometrioid Adenocarcinoma, Stage IV (14 cases)

Normal Controls

66 cores of control tissue

Seven types of control tissue

- Kidney
- Testis
- Endocervix
- Ovarian Surface Epithelium
- Endometrium
- Mucinous Cystadenoma
- Serous Cystadenoma

Ovarian Histologic Subtype

120 unique cases (4 duplicate blocks)

Each core is 0.6 mm in diameter

Cancer Cases

- Serous Adenocarcinoma (30 cases)
- Endometrioid Adenocarcinoma (30 cases)
- Clear Cell Carcinoma (30 cases)
- Mucinous Carcinoma (30 cases)

Normal Controls

63 cores of control tissue
Seven types of control tissue

- Kidney
- Testis
- Endocervix
- Ovarian Surface Epithelium
- Endometrium
- Mucinous Cystadenoma
- Serous Cystadenoma