

## **Pediatric Pathology Grossing Guidelines**

### **NEUROBLASTOMA AND RELATED TUMORS**

For intraoperative handling and submission of tissue for ancillary studies, please review the general pediatric pathology guidelines, and discuss the case with Dr. Goldstein or the Genitourinary-Peds attending, before proceeding.

UCLA is a participating member of the Children's Oncology Group (COG) and a tissue bank for pediatric neoplasms maintained at the COG Biopathology Center (BPC) at Nationwide Children's Hospital/Ohio State University. Many pediatric oncology patients will be randomized into therapeutic protocols. Since the protocols and trial studies often change, better to check if any special things need to be done BEFORE proceeding with dissection and fixation.

College of American Pathologists' pediatric tumor synoptic reports should be used, and the full CAP protocols may be reviewed for additional information.

All COG treatment protocols require central pathology review, and in some cases, an expedited rapid review is necessary to determine the correct initial treatment regimen for the child. Therefore, for all children registered on protocol, a complete duplicate set of sequential slides from each block should be ordered at the time of initial histologic processing.

For all pediatric tumors for which there is sufficient material available, after satisfying protocol requirements and our needs (including our TPCL), additional frozen tissue can be submitted to the BPC. TPCL personnel will be available during regular work hours to assist with the procurement of tissue for COG protocols and tissue banking.

### **Chromosomal Analysis**

It is advisable to save the tissue for chromosomal and/or molecular analysis of the following neoplastic disorders:

1. Wilms tumor
2. Neuroblastoma
3. Rhabdomyosarcoma (especially alveolar subtype)
4. Ewing's sarcoma/PNET/Desmoplastic small round cell tumor
5. Burkitt and other non-Hodgkin lymphomas
6. Acute leukemia and granulocytic sarcoma
7. Germ cell tumors
8. Malignant brain tumors
9. Synovial sarcoma
10. Any rare, unusual or undiagnosed pediatric tumor

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If chromosome analysis is needed on any pediatric tumor, obtain **RPMI medium** from tubes provided by the Flow Cytometry Laboratory in the Surgical Pathology refrigerator. Alternatively, the Cytogenetics Laboratory can provide RPMI media. You may call the Cytogenetics Lab at x41287 and they will provide you with the RPMI media. This lab is open Monday through Friday.

### **Specific Specimen Processing**

A sample dictation follows (kindly provided by Dr. Florette K, Gray Hazard, Lucille Packard Children's Hospital, Stanford University School of Medicine.) "Pilot" sections of tumors obtained prior to fixation may be submitted for next day preview and preliminary diagnosis. Block maps on photographs are encouraged for large and complex specimens.

Specimens may be small biopsies, primary resections or post-treatment resections

1. Describe appearance and dimensions; weigh excisional specimens
2. Photograph larger specimens prior to inking and slicing
3. Submit fresh tissue for cytogenetics and FISH for *MYC* amplification
4. If the patient is registered on a COG protocol, a portion of the tumor, ideally at least 1g, should be snap-frozen in liquid nitrogen (without OCT). At least one piece of tissue from the primary (if present) and from metastatic areas (if present) should be cut into 3-5 mm slices and wrapped in the foil and snap frozen in the vapor phase of liquid nitrogen (do not submerge the tissue in liquid nitrogen) or isopentane/dry ice. Tissue may also be submitted to our TPCL.
5. For COG protocol patients, optional fresh tissue may be requested. Contact the Peds Hem/Onc Clinical Research Associate (CRA), x56708 to arrange for pick-up and distribution of protocol materials.
6. Save small portion for EM.
7. Submit portions for routine histology, after overnight fixation for larger specimens.

## NEUROBLASTOMA

Pre-treatment

Post-treatment with hemorrhagic nodules



**Representative sections are taken and submitted:**

- A1- Tumor (pilot section)
- A2-A5- Representative Sections

**Sample Gross Template:**

Received [without fixative/in formalin] labeled with the patient's name "[#]", medical record number and designated "[\*\*\*]" is a [\*\*\*] g, [\*\*\*x\*\*\*x\*\*\*] cm [irregular/round/oval] portion of [red/yellow/tan/brown] soft tissue. It is entirely comprised of tumor [OR it is comprised of tumor and normal- appearing adrenal gland, small bowel, kidney located along the periphery]. The external surface is [intact/disrupted] and [does/does not] show a focus of possible rupture. The external surface is inked [insert color] [and the focus of possible rupture is inked [insert color]]. The specimen is bisected along its longest axis to reveal [homogeneous/heterogeneous], [insert color], [firm, soft] tumoral tissue. Foci of hemorrhage and necrosis [are/are not] present. [If present, describe loca8on: distributed throughout, along the periphery]. Well-circumscribed, distinct, hemorrhagic nodules [are/are not] present. The tumor [directly abuts/is present # cm from] the inked resection margin. [Photograph the cut surface.] Representative portions of fresh tissue are frozen at -80C for possible future ancillary studies and portions are submitted in RPMI for cytogenetic analysis. Following fixation, the specimen is serially sectioned to reveal [no additional lesions/additional lesions (describe if present)]. [Photograph any unusual features.]