



APPHON/ROHPPA

Processing Initial Malignant Specimens Found Unexpectedly

Purpose:

To facilitate appropriate handling of malignant specimens found unexpectedly at institutions [other than tertiary centres] where pediatric surgery is carried out.

Rationale:

Determining an accurate diagnosis and staging significantly influence long-term outcome in pediatric oncology. It is important that initial tumour samples be processed appropriately to ensure accurate diagnosis and staging.

The proper handling of a pediatric tumour is crucial. The improper handling of a pediatric tumour specimen may ultimately result in an inferior outcome for the child.

If a malignancy is not suspected but found incidentally at an institution where pediatric surgery is carried out, a pediatric pathologist should be contacted immediately to discuss further handling of the specimen.

The studies performed at a tertiary center will include:

1. Fresh specimen
 - 1.1 Touch preparations at least 10 slides (air-dried, unfixed and stored at -20° Celsius until shipped)
 - 1.2 Immunocytology
 - 1.3 FISH

2. Fresh tissue for a cell suspension in saline:
 - 2.1 Flow cytometry
 - 2.2 Cytogenetics
 - 2.3 Establishment of a cultured cell line

3. Fresh frozen tissue 0.5 –1 cm (-70° storage) for molecular diagnostic studies
4. Electron Microscopy
5. Routine formalin fixation

For appropriate processing, the referring center requirements are:

- Glutaraldehyde required for Electron Microscopy (refrigerated lasts weeks).
- Saline for the cell suspension and cytogenetics if transported the same or next day.
- The frozen tissue can be transported on dry ice at the institution's discretion.

Optimally, the tissue is received fresh at the pediatric pathology centre.

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