

Prevention of Infection (“Keeping Gross Room Staff Safe”)

(13.15 Prevention of Infection); Created June 26th, 2022 by Jeremy Deisch, MD

- **General Principle:** The following procedures are designed to minimize potential exposure of gross room personnel to infectious organisms. Unfortunately, the presence of known or suspected high-risk infectious organisms in specimens is not always communicated by the clinical staff, every specimen processed in the Anatomic Pathology Section should be approached as potentially infectious, with utilization of both decontaminating fixatives such as formalin, and adherence to proper use of personal protective equipment (PPE). For cases in which tissue is received with documented known or suspected infectious agents, the following procedures must be followed.
- **Procedures for Handling of Tissue with Known or Suspected Infection:**
 - Examples of high-risk infections: (list not intended to be all-encompassing)
 - **Hepatitis C** (requires at least overnight formalin fixation to neutralize virus)
 - **HIV** (handle with all available precautions, virus easily neutralized)
 - **Tuberculosis** (highly infectious, follow careful respiratory precautions, use proper fitting N95 mask and ventilation hood)
 - **COVID-19** (low-risk of infection from tissue, avoid aerosolizing procedures)
 - Fixation requirement: With the exception of tissue for intraoperative consultation (IOC), all specimens are to be grossed following complete formalin immersion and at least 1 hour of formalin fixation
 - Small specimens (e.g. biopsies and “routines” such as gallbladders, appendices, skin ellipses) do not require additional preparation
 - Large resection specimens (e.g. hysterectomy, colectomy, splenectomy) require proper preparation to allow for penetration of formalin, such as opening and pinning of bowel specimens, bivalving uteri, and fixation cuts (~ 1 cm in thickness) in large solid organs, followed by at least one hour of formalin fixation
 - Intraoperative Consultations:
 - Performance of IOC demands examination of fresh tissue. For cases with no known or suspected high-risk infection, no special precautions aside from proper use of PPE is required
 - For cases of known or suspected respiratory infection (e.g. COVID-19, tuberculosis), use N95 mask and handle all tissue in the vent hood in the gross room at LLUMC CT, in regular grossing stations at remaining pathology laboratories (TMC, SH, MUR)
 - After cutting infectious tissue on cryostat, place signage on cryostat to prevent further use by pathology staff until proper decontamination.
 - Specimen Grossing Considerations:
 - **Placenta:**
 - Placentas with a clinical diagnosis of 1) chorioamnionitis, 2) GBS positive, and/or 3) maternal fever should be grossed same day, following at least 1 hour of formalin fixation
 - All remaining placentas should be grossed the following day, after overnight formalin fixation to allow for proper formalin penetration of the entire disc
 - **Liver:**
 - Prior to grossing hepatectomy specimens, review the requisition and the clinical documentation on the EHR to determine if the specimen is Hepatitis C positive.
 - Handling of Hepatitis C positive livers
 - Immerse specimen in formalin, allow to fix for approximately 4 hours
 - Remove liver from formalin and carefully perform fixation cuts
 - After fixation cuts, transfer back to formalin for ~ 48 hours fixation

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- Label the specimen container as “hepatitis C positive”
 - Disinfect grossing station and all implements used with appropriate disinfectant
 - Dispose of and replace gloves and any other soiled PPE
- For the policy covering handling of tissue with known or suspected Creutzfeld-Jakob disease (CJD), refer to the procedure manual on pathology shared drive.