

CYTOGENETIC STUDIES OF STILLBIRTHS:

1. Obtaining specimen:

- cord blood, or infant cardiac blood, and sample of amnion should be taken in the delivery room as soon as possible on all stillbirths (including macerated stillbirths). These samples can be stored until the attending physician or pathologist decides the specimens do or do not need to be sent for cytogenetics.
- cord blood or infant cardiac blood - obtain 1 - 10 ml. of sterile blood via needle withdrawal and place in a green top tube (sodium heparin). Store at room temperature and ship ASAP. Do not freeze.
- placental sample - using sterile instruments, take a 1 cm. X 1 cm. sample of the amnion from the fetal surface of the placenta next to the insertion of the cord. Viral transport media or sterile Hank's solution or sterile tissue culture medium obtained from the cytogenetics lab should be used if possible. Wash in sterile media and place in a sterile container. Ensure the sample is completely covered with medium to avoid the sample drying out during transport. Seal the container and label. Store at room temperature and ship ASAP. Do not freeze. If none of these solutions are available, call the Cytogenetics Laboratory at 204-787-2489 for assistance. The placenta may be stored in the fridge overnight before a sample is taken if needed. If assistance is needed on a weekend, call the Cytogenetic technologist-on-call at 931-5915.
- additional samples may be taken at autopsy by the pathologist (e.g., serous membrane, gonadal tissue).
- **DO NOT PLACE CYTOGENETIC SAMPLES IN FORMALIN.**
- if an antenatal ultrasound reveals fetal anomalies and abundant amniotic fluid is present, consideration should be given to obtaining amniotic fluid for cytogenetics if not already done. This may provide a better result than post-delivery samples, particularly if delivery is not imminent.

2. Criteria for for chromosomal analysis:

- Cytogenetics Laboratory will do chromosome analysis on infant blood on all unexplained stillbirths. If blood is unavailable, no other specimen is accepted unless fetal anomalies and/or IUGR are present.
- Cytogenetics Laboratory will do chromosome analysis on tissue other than infant blood, e.g., amnion, if congenital anomalies and/or IUGR are present. In this situation, however, blood is still preferred and should be sent along with the amnion.
- Blood from a macerated infant may not be successfully cultured. In this situation, culture of the amnion may still be successful. Therefore, if the infant is macerated, send both blood and amnion if available.

3. *Handling of cytogenetic specimens:*

- **fill out a cytogenetic requisition form**
- **label all containers**
- **pack in specimen containers**
- **if there is danger of extreme heat or cold during transport, ensure samples are properly insulated - do not freeze**
- **send as soon as possible to the Cytogenetics Laboratory**
- **the following information should accompany specimens:**
 - **name and date of birth**
 - **brief clinical history**
 - **provisional diagnosis**
 - **physician's name to whom results should go**
 - **submitting hospital/institution**