



## Clinical Laboratories

Colorado, USA

### 117809.110 Disposition of Products of Conception and Fetal Remains

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**Comments for version 3.0**

- a. Placentas cannot be released to the family after submission to Pathology. Formalin is used for preservation once submitted to Pathology. Formalin is a carcinogenic chemical that could cause harm if handled inappropriately.
- b. Clarification by legal on who can authorize consent to autopsy if the mother is incapacitated.

**Approval and Periodic Review Signatures**

Type	Description	Date	Version	Performed By	Notes
Approval	Lab Director	3/17/2021	3.0	Carol Dittmann	
Approval	Pathologist Review	3/12/2021	3.0	Lian Zhang	
Approval	Lab Manager	2/14/2021	3.0	Sarah Miller	Legal and Risk approval 1/20/21.
Approval	Manager	2/14/2021	3.0	Sarah Miller	Legal and Risk approval 1/20/21.
Approval	Lab Director	1/2/2020	2.0	Carol Dittmann	
Approval	Pathologist Review	12/27/2019	2.0	Lian Zhang	
Approval	Lab Manager	12/12/2019	2.0	Sarah Miller	
Approval	Manager	12/12/2019	2.0	Sarah Miller	
Approval	Lab Director	7/19/2019	1.0	Carol Dittmann	
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Approval	Lab Manager	7/8/2019	1.0	Sarah Miller
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#### Version History

Version	Status	Type	Date Added	Date Effective	Date Retired
3.0	Approved and Current	Major revision	2/14/2021	3/17/2021	Indefinite
2.0	Retired	Major revision	12/9/2019	1/2/2020	3/17/2021
1.0	Retired	Initial version	1/24/2019	7/19/2019	1/2/2020

117809.110.Disposition of Products of Conception and Fetal Remains, Version 3.0.

# Department of Pathology- Histology

## Disposition of Products of Conception and Fetal Remains

### Purpose

To establish procedure relative to handling of fetal autopsy and fetal surgical cases.

### Policy

1. The pathology department divides fetuses between the autopsy service and surgical pathology as follows:
  - a. All intact fetuses 20 weeks in gestational age or greater are assigned to autopsy.
  - b. All fragmented fetus (not intact), regardless of gestational age, are assigned to surgical pathology.
  - c. Any fetus 12 weeks and older, regardless of intact or fragmented, must be accompanied by a disposition form, signed by the mother, expressing consent for any autopsy or surgical pathology procedure performed.
  - d. Embryos and fragmented products of conception of 11 weeks, 6 days (6/7 weeks) or lesser gestation do *not* require special permission for examination.
2. Exceptions, in which a formal consent is not required for pathology examination, include any specimen with a clinical concern for the following:
  - a. Ectopic or rule out ectopic pregnancy
  - b. Missed abortion
  - c. Molar pregnancy
  - d. Pregnancy of unknown location
  - e. Retained placenta/products of conception
3. The clinical physician's estimate of gestational age as listed on the specimen requisition or death certificate will be used for autopsy service versus surgical pathology assignment purposes. If no death certificate is filled out, the clinician's estimate of gestational age as listed in the mother's medical record will be used instead.
4. Who can give consent for infants/fetal autopsy:
  - a. As a rule, autopsy consent should be obtained from the baby's mother.
  - b. If the mother is a physically/mentally incapable of participation in the autopsy decision, and it is reasonable to delay the autopsy, and the best approach is to wait until she recovers sufficiently to sign the consent form.
  - c. If postponing the autopsy is not feasible, or if it is unlikely that the mother will recover within a reasonable period of time, the father of the baby may be approached for authorization.
    - i. The father is eligible to sign if he is married to the mother, has documented power of attorney for the mother, or if a formal statement of paternity document has been executed.
    - ii. Otherwise, he is *not* eligible to sign.
  - d. If the mother is incapacitated and the father is not involved or is ineligible to sign, the mother's authorized representative, including guardian or power of attorney may provide consent.
  - e. If the mother and father are not able to provide consent and there is no authorized representative of the mother, an autopsy cannot be performed unless a court order is obtained by an interested party.

- f. Physicians do not have the right to sign for autopsies on deceased infants/fetuses.
5. Coroner cases
  - a. All infant/fetal deaths are reportable to the Douglas county Coroner (303-814-7150), and Highlands Ranch Hospital House supervisor will handle the coroner cases.
6. Organ/Tissue Donation
  - a. If the mother has given permission for organ or tissue donation, the pathology department makes every effort to facilitate the recovery process. Usually, by the time the baby is ready for autopsy, the transplant banks have completed their chart review and organ/tissue recovery.
  - b. If this is not the case, pathologists are encouraged to cooperate with transplant personnel since there are often strict time constraints for obtaining usable tissue.
  - c. If organ/tissue donation will interfere with autopsy results (i.e. mother wants to donate the baby's heart, but also once autopsy information about the heart), these must be discussed with the mother before either takes place.
  - d. The house supervisor should be contacted to assist settling this issue with the mother.
7. Placentas
  - a. Whenever possible, the placenta(s) should be submitted for examination with the deceased infant/fetus. If forms are received with the placenta referencing a deceased infant or fetus, every effort should be made to facilitate the dissection of both together.
  - b. Placentas cannot be released to the family after submission to Pathology. Formalin is used for preservation once submitted to Pathology. Formalin is a carcinogenic chemical that could cause harm if handled inappropriately.
8. Disposition of the body
  - a. Many families will choose a private funeral home for the disposition of the baby's body. Others will authorize a cremation through the labor and delivery unit and the house supervisor. Either way, the baby's body should be treated with care and respect. Do *not* assume there will be no viewing of the baby. Make incisions as discreetly as possible in every infant/fetus examined/autopsied.

## Procedure

1. Autopsy
  - a. Consent for Autopsy form is required to perform exams on:
    - i. All live-born infants, regardless of gestational age or size
    - ii. All non-viable fetuses or stillbirths with gestational age of 20 weeks and older
    - iii. Fetal autopsy is not performed at Highlands Ranch Hospital. All stillbirths (over 12 weeks' gestation) and request for autopsy submitted to Pathology will be sent to Children's Hospital Colorado (720-777-6714) for examination.
2. Surgical examination
  - a. Fetuses and stillbirths under 12 weeks require a surgical pathology requisition.
  - b. Fetuses and stillbirths between 12 weeks and 20 weeks require surgical pathology requisition and consent for examination

- c. Fetuses greater than 20 weeks that are electively terminated require surgical pathology requisition and consent for examination
  - d. These cases will be processed as surgical pathology specimens
3. Disposal
- a. Highlands Ranch Hospital will not use the laboratory for any infant or fetal tissue disposal.
  - b. Infant and fetal tissue that has been sent to pathology will be stored for 3 weeks and then moved to a separate location to be held for hospital or private disposition.
  - c. Private or Hospital disposition will be the responsibility of the labor and delivery floor.
4. Laboratory disposition is not available for any infant born alive. Disposition of body is parental responsibility.
5. The coroner must be notified by the floor if a POC or Fetal demise meets any of the following criteria:
- a. All newborn infants who die within 24 hours of birth regardless of the duration of life
  - b. Any fetal death due to or as a consequence of criminal abortion

### Procedure Notes

1. Gestational age listed by the healthcare provider will be used to determine whether or not consent is required.
  - a. In situations where the gestational age is unknown, anatomic measurements of the products of conception will be used to estimate age (see appendix A).
2. It is recommended that infant/fetal autopsy consent forms be carefully scrutinized before they are accepted. If a signature looks even remotely suspicious (disjointed or lagging), contact the house supervisor.
3. Any POCs that are considered as surgical cases will receive pathology examination by a pathologist at Highlands Ranch Hospital. The pathologist will consult with a pathologist at Children's Hospital Colorado if necessary.
4. A death after live birth, at any stage of gestation, requires a Certificate of Birth and a Certificate of Death.
5. Consultation with a chaplain is available following delivery. They are available to assist the staff and the family
6. Parent(s) must indicate their choice and sign the appropriate consent for disposition. A copy of the consent for disposition accompanies the POC and fetal remains when transported to Pathology or the Morgue. Parent(s) may select disposition with a mortuary of their choice, or disposition of any fetal remains can be handled by Highlands Ranch Hospital regardless of size, if the family wishes. If a hospital disposition is selected, fetal remains are not available to the family.
7. A patient's request to decline pathology examination will be honored as long as the coroner does not need to assume jurisdiction.

### References

1. Memorial Hospital Policy, "Perinatal Death including Lethal Anomaly and Nonviable Live Birth, 03/2014.
2. Longs Peak Hospital Policy, "Disposition of Products of Conception and Fetal Remains".

3. University of Colorado Anschutz Medical Campus Policy, "Perinatal Loss Information for Pathologists".
4. C.R.S. § 25-2-110.5, Fetal Death—Treatment of Remains
5. C.R.S. § 25-15-402.5, Disposition of Fetal Tissue

## Appendix A

REFERENCE VALUES FOR FETAL AND PLACENTAL GROWTH IN EARLY PREGNANCY					
Reference Values for Fetal and Placental Growth From 8-20 Weeks Gestation					
Postmenstrual Gestational Age	Mean Placental Weight (g) (95% CI)	Mean Umbilical Cord Length (mm)	Fetal Crown Rump Length (mm)	Fetal Foot Length (mm) ± SD	Fetal:Placental Weight Ratio
8	1.6 (0.0-3.7)	20	14	4	0.18
9	15.2 (13.3-17)	33	20	5	0.25
10	28.8 (27.2-30.4)	55	26	6	0.38
11	42.4 (41.1-43.8)	92	33	7	0.58
12	56.1 (54.8-57.3)	126	40	9	0.65
13	69.7 (68.4-71)	158	48	12 +/- 2	0.72
14	83.3 (81.8-84.8)	188	56	17 +/- 3	0.73
15	96.9 (95.2-98.6)	215	65	19 +/- 1	0.80
16	110.5 (108.5-112.5)	240	75	22 +/- 2	1.0
17	124.2 (121.8-126.5)	264	88	25 +/- 3	1.29
18	137.8 (135.0-140.5)	287	99	28 +/- 2	1.63
19	101	309	112	29 +/- 4	1.78
20	112	330	125	33 +/- 2	2.23

CI = confidence interval; SD = standard deviation. Placental weight data for 19 and 20 weeks gestation are from a separate reference; note that mean placental weight is smaller than one would expect from weeks 8-18. Foot length can be used to assess fetal growth in disrupted fetuses. Data for umbilical cord length are derived from ultrasonographic studies (Weissman A et al: Sonographic measurements of the umbilical cord and vessels during normal pregnancies. J Ultrasound Med. 13(1):11-4, 1994). Other data is derived from Kalousek DK et al: Pathology of the human embryo and previable fetus: an atlas. New York: Springer, 1990; Boyd J et al: The Human Placenta. Cambridge: Heffer & Sons, 1970; Stroeter CL: Weight, sitting height, head size, foot length and menstrual age of the human embryo. Carnegie Inst. Contrib. Embryol. 11:144, 1920.