



**OBSTETRICS AND GYNAECOLOGY  
CLINICAL PRACTICE GUIDELINE**

# Labour: Indications for placental examination in pathology

<b>Scope (Staff):</b>	WNHS Obstetrics and Gynaecology Directorate staff
<b>Scope (Area):</b>	Obstetrics and Gynaecology Directorate clinical areas at KEMH

This document should be read in conjunction with this [Disclaimer](#)

## Specimen transport

1. The placenta should be checked; double bagged (plastic), labelled and placed in a plastic container.
2. Ensure a patient addressograph and date is applied on the:
  - outer plastic bag containing the placenta,
  - the container lid
  - the side of the container
3. The placenta is placed in a refrigerator (in the utility room in the Labour and Birth Suite [LBS]) with the completed paperwork until transfer to Specimen Reception.
  - In cases of perinatal death when post-mortem is **required** the placenta is taken by the Patient Care Assistant to Perinatal Pathology at KEMH. The labelled placenta is placed in the refrigerator in the LBS Perinatal Loss room. In cases when an autopsy is **declined**, a Pathology form must be completed and sent with the placenta.

## Pathology request form- information required

Information provided on the pathology request form should include:

- Consultant's name legibly written on the form
- Provider number
- Parity
- Gestation
- Pregnancy history<sup>1</sup>
- Intrapartum concerns/abnormalities<sup>1</sup>
- Neonatal: Any abnormalities<sup>1</sup>



- Therapeutic interventions<sup>1</sup>
- Both histopathological and microbiological examination must be requested

## Placentas for routine histological examination:

- IUGR<sup>2</sup> (3<sup>rd</sup> centile)
- Prematurity (< 32 weeks)<sup>3, 4</sup>
- Severe fetal distress or poor condition at birth (scalp lactate >4.5, cord pH <7.2, Apgar ≤ 7 at 5min)<sup>2</sup>. These variables MUST be clearly stated on the request form.
- Stillbirth<sup>2-4</sup>
- Late miscarriage<sup>4</sup> (14 weeks and over)
- Fetal Hydrops<sup>4</sup>
- Twins where chorionicity has been questioned by the clinical team

Report available within 7 working days from the receipt of the placenta.

## Placentas for macroscopic examination and storage:

Macroscopic examination includes measurements and weights.

Storage includes small sections of membranes, cord and placenta tissue being taken and placed in wax blocks and placed on permanent record. Histological slides can be prepared from these as requested.

Where microscopy, culture and sensitivity (MC&S) has been requested on the form, a small sample will be forwarded to microbiology who will issue a report.

A Pathologist may, based on the clinical history, decide that routine microscopic examination should proceed.

### Maternal

- Pre-eclampsia<sup>2, 5</sup>, pregnancy induced hypertension;<sup>3</sup> chronic hypertension
- Maternal infection<sup>3, 5</sup> or peripartum sepsis<sup>2</sup>
- Significant maternal disease or conditions
- Drug<sup>5</sup> or alcohol misuse<sup>1</sup>
- Unexplained or recurrent pregnancy problems e.g. stillbirth, early pregnancy loss, preterm birth<sup>6</sup>
- Metastatic malignancy

### Fetal

- Rhesus (& other) isoimmunisation<sup>3</sup>
- Fetal abnormality
- Neonatal death<sup>2</sup>

### Placental

- Abruption<sup>2, 3</sup>

## Other

- Medical request

## At the time of macroscopic cut-up

- Placenta weight below 5<sup>th</sup> percentile or over 95<sup>th</sup> percentile (as determined by the Pathologist at the time of macroscopic cut-up)
- Massive perivillous fibrin deposition suspected at the time of macroscopic cut-up

## References and resources

1. Faye-Peterson OM, Heller D, Joshi V. **Handbook of placental pathology**. 2nd ed. Oxon: Taylor & Francis; 2006.
2. Zuccollo J. A practical approach to placental examination. **Birth**. 2010;12(4):39-41. Available from: [http://www.ranzcog.edu.au/editions/doc\\_view/305-30-a-practical-approach-to-placental-examination.html](http://www.ranzcog.edu.au/editions/doc_view/305-30-a-practical-approach-to-placental-examination.html)
3. Hargitai B, Marton T, Cox PM. Best practice no 178: Examination of the human placenta. **J Clin Pathol**. 2004;57(8):785-92. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/15280396>
4. Evans C, Cox P. Tissue pathway for histopathological examination of the placenta: The Royal College of Pathologists. 2019. Available from: <https://www.rcpath.org/uploads/assets/ec614dfa-007c-4a93-8173cb202a071a72/G108-Tissue-pathway-for-histopathological-examination-of-the-placenta.pdf>
5. Zhou Y, Ravishankar S, Luo G, Redline R. Predictors of high grade and other clinically significant placental findings by indication for submission in singleton placentas from term births. **Pediatric and Developmental Pathology**. 2020;23(4):274-84.
6. Curtin WM, Krauss S, Metlay LA, Katzman PJ. Pathologic examination of the placenta and observed practice. **Obstet Gynecol**. 2007;109(1):35-41. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/17197585>









## Related WNHS policies, procedures and guidelines

WNHS Policy [Consent for Under 20 Week Fetal Autopsy Examinations](#)

KEMH Clinical Guidelines, Obstetrics & Gynaecology:

- [Perinatal Loss](#): Legalities and reporting; Perinatal Loss in the third trimester Management
- [Placenta Being Taken Home: Safe Handling](#)
- Labour (Third Stage) [Retained Placenta](#)

[PathWest Test Directory](#)

Keywords:	Placenta, examination of the placenta, placental pathology, sending placenta to pathology		
Document owner:	Obstetrics and Gynaecology Directorate (OGD)		
Author / Reviewer:	Head of Department Obstetrics		
Date first issued:	01/1998		
Reviewed dates: (since Oct 2015)	; Oct 2015; June 2019; Nov 2020; April 2021	Next review due:	April 2024
Supersedes:	The April 2021 version supersedes the version dated Nov 2020 The Nov 2020 version superseded the version dated June 2019		
Endorsed by:	Obstetrics & Gynaecology Directorate Management Committee [OOS approved with Medical and Midwifery Co directors]	Date:	29/04/2021
NSQHS Standards (v2) applicable:	<input checked="" type="checkbox"/>  1: Clinical Governance <input type="checkbox"/>  2: Partnering with Consumers <input checked="" type="checkbox"/>  3: Preventing and Controlling Healthcare Associated Infection <input type="checkbox"/>  4: Medication Safety	<input type="checkbox"/>  5: Comprehensive Care <input checked="" type="checkbox"/>  6: Communicating for Safety <input type="checkbox"/>  7: Blood Management <input type="checkbox"/>  8: Recognising and Responding to Acute Deterioration	

**Printed or personally saved electronic copies of this document are considered uncontrolled.  
Access the current version from WNHS Healthpoint.**

This document can be made available in alternative formats on request for a person with a disability.

© North Metropolitan Health Service 2021

Copyright to this material is vested in the State of Western Australia unless otherwise indicated. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the provisions of the *Copyright Act 1968*, no part may be reproduced or re-used for any purposes whatsoever without written permission of the State of Western Australia.

[www.nmhs.health.wa.gov.au](http://www.nmhs.health.wa.gov.au)