Placenta-*Scope* Reporting is in line with **International Guidelines**

Sampling and Definitions of Placental Lesions

Amsterdam Placental Workshop Group Consensus Statement

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The Royal College of Pathologists
Pathology: the science behind the cure

Tissue pathway for histopathological examination of the placenta

Additional highlights of Placenta-*Scope*

- Microscopic images, slides, paraffin-embedded tissue blocks shall be provided on request
- Investigations like conventional cytogenetics, chromosomal microarray are available for fetus/neonate with clinical suspicion of chromosomal abnormalities along with placental features emphasizing the same
- Newborn screening and diagnostic packages are available for fetus/neonate with placental features of inherited disorders of metabolism

References

1. Pathology of the Placenta : A practical guide, (1st edition, 2019)
2. Tissue pathway for histopathological examination of the placenta, 7 July 2017, Dr Phillip Cox, Birmingham Women's and Children's Hospital NHS Foundation Trust, Dr Clair Evans, Queen Elizabeth University Hospital, Glasgow.
3. Sampling and Definitions of Placental Lesions, Amsterdam Placental Workshop Group Consensus Statement, T. Yee Khong, MD; et al., May 2016.

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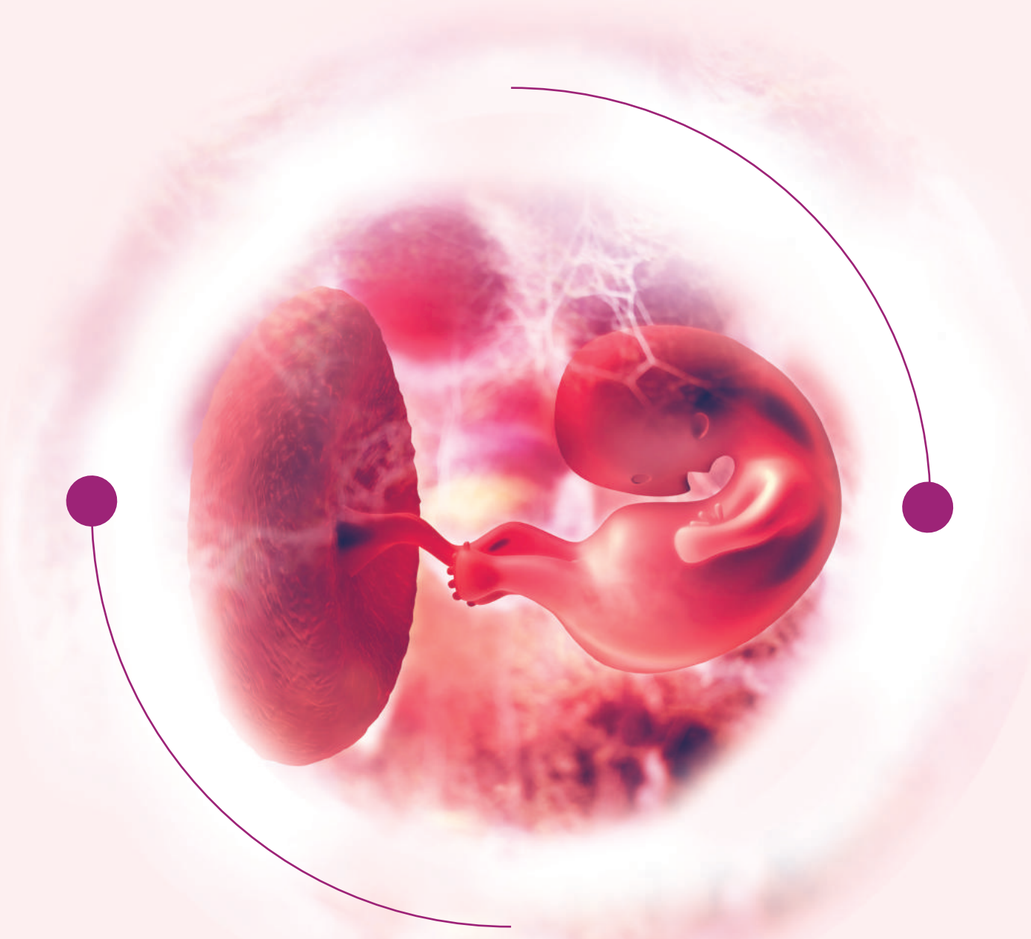

Placenta-*Scope*

In-depth histopathological analysis of the placenta for adverse perinatal outcome.

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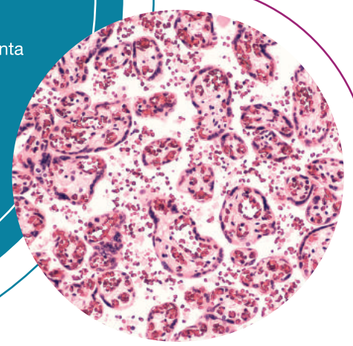
What is **Placenta-*Scope?***

LifeCell's Placenta-Scope includes a thorough macroscopic & microscopic analysis of the placenta in order to determine the exact aetiology for an adverse perinatal event.



What are the **indications** for Placenta-*Scope?*

As per the guidelines defined by the Royal College of Pathologists (RCPath), a placental examination is deemed essential or desirable for the following conditions:

Source	Referral for placental examination is **ESSENTIAL**	Referral for a placental examination is **DESIRABLE**
Fetal	• stillbirth (antepartum or intrapartum) • severe fetal distress requiring admission to NNU • prematurity (less than 30+0 weeks gestation) • fetal growth restriction (birth weight below 3rd centile) • fetal hydrops	• prematurity (30+0–36+6 weeks) • fetal congenital malformation • rhesus (and other) isoimmunisation • twins or other multiple pregnancies (uncomplicated)
Maternal	• maternal pyrexia (>38°C) • late miscarriage	• gestational diabetes • maternal group B streptococcus • pre-eclampsia/maternal hypertension • maternal coagulopathy • maternal substance abuse
Placental /Cord		• abnormal placental shape (if clinically relevant) • 2 vessel cord, etc. • prolonged rupture of the membranes (more than 36 hours) • morbidly adherent placenta • placental abruption

What are the **sample & documentary requirements** for Placenta-*Scope?*

- This test requires the entire placenta along with the umbilical cord for examination
- The Placental specimen is collected by a LifeCell paramedic in an appropriately labelled sturdy plastic container with a tight-fitting lid, containing 10% buffered formalin. ***Please note that specimens not sent in formalin shall not be accepted for processing***
- A test requisition form with the complete clinical details of the mother & the baby/fetus should be submitted along with the sample

What kind of **report** does Placenta-*Scope* provide?

LifeCell Diagnostics always endures providing a clear and succinct report to help clinicians make an accurate diagnosis. The structure & format of a Placenta-Scope report is in line with the recommendations made by the Amsterdam Placental Workshop Group Consensus. A sample report is provided alongside.

Demographics	Patient name, medical record number, birthdate Surgical pathology report number
Clinical information	34 – year old primigravida, Diabetes mellitus type 1, HELLP syndrome, urgent cesarean section in gestational week 38+1. Child's weight 4010g, Apgar 9-10.
Macroscopy	Placenta with 656 g net weight, basal area 282 cm^2. Umbilical cord length 62 cm, diameter 1 cm, 3 vessels, centrally inserted, right hand coiling, 2 coils each 10 cm. Normal chorionic surface, no fetal vessel thrombosis. Membranes with normal opacity. Cut sections each 1-1.5 cm show normal parenchyma without mass lesions. Decidua without any signs of bleeding.
Microscopy	Umbilical cord with 3 vessels without inflammation. Membranes without meconium macrophages, no inflammation. Intermediate villi of medium size with loose reticular stroma and numerous fetal capillaries predominate. Minimal vasculosyncytial membrane formation. Trophoblast with increased syncytial sprouts and knots. Intervillous space with mild fibrin deposition. Focal villous collapse.
Diagnosis	Macrosomic placenta with villous maturation disorder.
Comment	The placenta's net weight is >90th-percentile for 38 weeks gestational age (50th %ile : 460g, 90th %ile: 605g). The prominent excess of intermediate villi with infrequent terminal villi and few vasculosyncytial membranes indicates a maturation disorder . Maturation disorders of different types are seen most commonly in maternal metabolic disorders, but they are not necessarily diagnostic of such disorders. The pathogenesis underlying maturation disorders is still not completely understood. In this case the maternal type I diabetes mellitus may explain the fetal and placental macrosomy. The additional findings of increased syncytial knots and intervillous fibrin suggest the onset of maternal vascular malperfusion, correlating with the clinically diagnosed HELLP syndrome. The recurrence risk may depend on the degree of control of the maternal diabetes .

What are the **benefits provided** by Placenta-*Scope?*

Allows identification of placental lesions that may be associated with maternal/fetal vascular under perfusion, infection and fetal thrombosis

Reporting based on RCPath Guidelines & Amsterdam Placental Workshop Group Consensus Statement

Turn Around Time of 7 days

Accurate interpretation of results by expert pathologists

Provides information that can guide the management of future pregnancies.

Helps to prove the exact aetiology for perinatal death and thus acts as a legal shield to the obstetrician