100% Non-Invasive
Reliable Results within minutes
Excellent Negative Predictive Value

A revolution in Fetal Lung Maturity tests
Preterm Birth Rate is increasing year by year in developed countries.

Neonatal Respiratory Morbidity* remains as the leading problem in preterm babies despite prenatal and postnatal treatments.

Current tests for the assessment of Fetal Lung Maturity** (FLM) require an amniocentesis, which limits their practice due to the associated risks and discomfort.

It is time for a change

An unsolved clinical need

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- Neonatal Respiratory Morbidity* remains as the leading problem in preterm babies despite prenatal and postnatal treatments.
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The solution

quantusFLM is a non-invasive, fast and easy-to-use Fetal Lung Maturity test based on the analysis of an image of the fetal lungs obtained by ultrasound.

quantusFLM can provide an accurate result of baby’s Lung Maturity in a few minutes.

Comparison of quantusFLM and other commercial FLM tests

<table>
<thead>
<tr>
<th></th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>NPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/S Ratio A</td>
<td>72%</td>
<td>84%</td>
<td>37%</td>
<td>95%</td>
</tr>
<tr>
<td>PG A</td>
<td>88%</td>
<td>65%</td>
<td>24%</td>
<td>97%</td>
</tr>
<tr>
<td>Lamellar body A</td>
<td>88%</td>
<td>66%</td>
<td>19%</td>
<td>98%</td>
</tr>
<tr>
<td>quantusFLM B</td>
<td>86%</td>
<td>86%</td>
<td>62%</td>
<td>96%</td>
</tr>
</tbody>
</table>

L/S: Lecithin / Sphingomyelin
PG: Phosphatidyl Glycerol

*Defined as either respiratory distress syndrome or transient tachypnea of the newborn that require his admission to a special unit and the use of medical respiratory support.

**The term “fetal lung maturity” is universally used by the scientific and medical community to define the capacity of fetal lungs to achieve normal respiratory function if the fetus is born.
How does quantusFLM work?

Obtain an Ultrasound Image of the fetal thorax at the level of the cardiac 4-chambers view in DICOM format.

Use quantusFLM web application to analyse the image in just 4 simple steps:

1. **Upload** the DICOM image. More than one image can be uploaded for your convenience.
2. **Select** the desired image to be analysed.
3. **Label** introduce clinical data and draw the lung region to be analysed.
4. **Send** the sample to be analysed.

The results will be available in the web in less than two hours. You will be notified by mail as soon as a new result is available.

Why does quantusFLM work?

Changes occurring at the histological level of a tissue, including the proportion of collagen, fat or water, among others, affect ultrasound backscattering signals. This constitutes the basis for ultrasound image reconstruction. Computerized quantitative ultrasound analysis detects extremely subtle changes, unpercievable by the human eye, in order to accurately infer relevant information of tissue microstructure. Fetal lung maturity constitutes an obvious candidate for the use of quantitative ultrasound solutions as fetal lung maturity results from the combination of the evolving changes in lung airways and alveoli during gestation, and the concentration of surfactant. Over the last 30 years research has focused on the extraction of quantitative information about tissue characteristics from ultrasound images.

quantusFLM brings the opportunity to avoid the need for using an invasive technique to predict neonatal respiratory morbidity in the clinical practice. Transmural Biotech’s quantusFLM software uses a combination of cutting-edge image analysis technologies that make individualized predictiveness of the risk of neonatal respiratory morbidity. quantusFLM reaches unprecedented levels of accuracy and reproducibility for a completely non-invasive ultrasound-based test.
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References


