quantus PREMATURITY

REVOLUTIONIZING DIAGNOSTIC IMAGING

The first test for the early detection of spontaneous preterm birth

AN UNMET CLINICAL NEED

Prematurity is the leading cause of infant mortality in developed countries, the second around the world and has a global prevalence of approximately 10%. Every year more than 15 million premature babies are born in the world who can suffer complications due to this condition. Prematurity contributes in the long term to suffering from growth disability and other pathologies such as cognitive morbidity among others.

The incidence of prematurity has remained stable over the past few decades, as the current reference test for detection is based on the measurement of cervical length (CL).

quantusPREMATURITY

The first test

- **Early detection: quantusPREMATURITY is the first test that allows an early detection of the risk of sPTB before the cervix is shortened, through the automatic analysis of an ultrasound of the uterine cervix. It provides the opportunity to avoid cervical length variability by simplifying the process, making it more efficient thanks to advanced image processing techniques and Artificial Intelligence (AI).**
- **Multi-result: With quantusPREMATURITY we obtain the prediction of sPTB at two levels of gestation (before 34 and 47 weeks) in order to predict different follow-up scenarios in pregnancy.**
- **Reliable: quantusPREMATURITY results are better performing and more robust than CL-based results.**
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Comparison of quantusPREMATURITY with Cervicometry (CL):

Risk	Test	Sensitivity	Specificity	PPV	NPV
PPE < 34 Weeks	quantus PREMATURITY	32,4%	99,5%	53,7%	98,8%
	CL	10,0%	98,8%	10,0%	98,4%
PPE < 37 Weeks	quantus PREMATURITY	13,2%	98,7%	36,8%	95,8%
	CL	10,3%	99,1%	32,9%	95,7%

*Sensitivity: probability that the test will identify as sick the one who is actually sick.
*Specificity: probability that the test will identify as not sick the one who is not actually sick.
*PPV and NPV: Positive Predictive Value and Negative Predictive Value.

HOW TO USE QUANTUSPREMATURITY?

Using quantusPREMATURITY is easy, it only requires 3 simple steps:

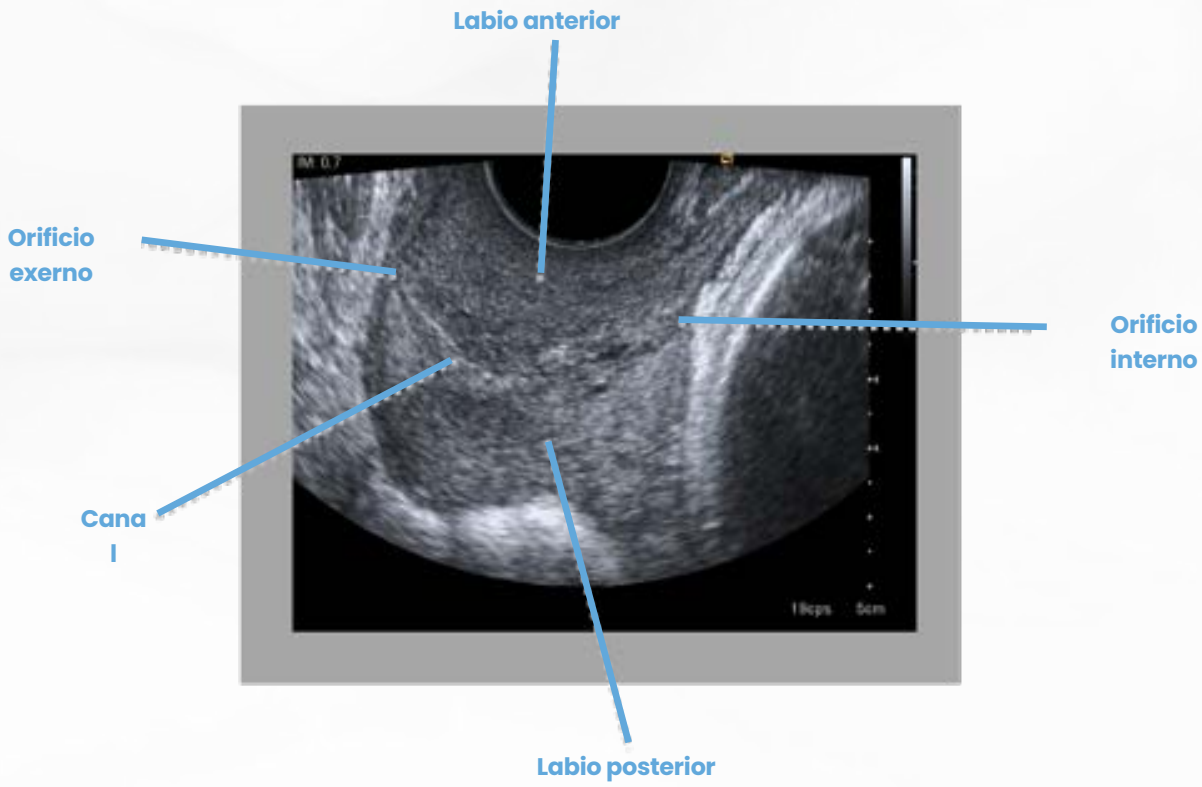
1. Purchase one echography

2. Upload the image to the web application

3. Get the results

Paso 1: Getting an ultrasound

quantusPREMATURITY requires a transvaginal ultrasound of the neck in DICOM format. A simple guide is available in the application showing how to make acquisitions



Step 2:

Use the quantusPREMATURITY web application to analyze the image.

This application is a simple tool that allows you to send to the system the image you want to analyze. To do this, you only have to follow three simple steps to complete the analysis:

Subir

The DICOM image Allowed to upload more of an image according to your convenience

Seleccionar

The desired image to be analyzed

Enviar

The sample to be analyzed

Step 3: Get the result of the application in few minutes.

WHEN TO USE QUANTUSPREMATURIT

During morphological screening ultrasound in the second trimester, it may be very useful to associate transvaginal examination to assess the risk of spontaneous preterm birth and to estimate the need for additional controls or initiate specific therapeutic strategies, in order to reduce this risk. The prediction of the risk of EPP before week 34 is especially relevant at the clinical level, since it represents the gestational age with the highest number of fetal complications associated with prematurity.

quantusPREMATURITY is indicated for single pregnancies between 19 and 24 weeks gestation to determine the risk of spontaneous preterm birth as a result of premature cervical remodeling. For those patients with an increased risk of EPP with a history of PEP in previous gestation, a history of conization and/or presence of uterine malformation, they could especially benefit from this test in order to adapt their follow-up and / or treatment in a personalized way.

For example, in a 20-week primgestation of 20 weeks, where the measurement of cervical length is 25 mm and in the directed anamnesis, the patient does not represent any other risk factor for preterm birth, the baseline risk for EPP for <34 weeks is 1.7% and for <37 weeks 4.8%. The patient undergoes, together with morphological ultrasound, a transvaginal ultrasound to assess the risk of EPP. With a "low risk" result in quantusPREMATURITY would reduce the risk of PPE in <34 weeks to 1.1% and in <37 weeks by 4.1% while a "high risk" result would increase it to 25.8% for <34 weeks and 46.7% for <37 weeks. Therefore, knowing the risk of EPP early through a simple transvaginal ultrasound can have a clear impact on the clinical management of the case to assess subsequent controls or start of personalized treatments.

AN EXPERIENCE WITHOUT LIMITS

- **24-hour unrestricted access: Through an internet connection it is possible to use quantusPREMATURITY and review the results at any time and from anywhere.**
  No installation required: or download of any type of Software.
- **Great compatibility: quantusPREMATURITY is compatible with most web browsers as well as devices used in medical practice.**
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quantusFLM OFFERS A HIGH ECONOMIC VALUE

- **It does NOT require initial investment in infrastructure!**
  Pay as you go: Pay only for each analysis you request!
- **It brings more value to your clinic and increases your profits!**

WHY DOES QUANTUSPREMATURITY work?

The changes that occur at the histological level in a tissue, including the proportion of collagen, fat or water, among others, affect the dispersion of ultrasound signals. These signals form the basis for ultrasound imaging.

The quantitative analysis of ultrasound images, together with advanced Artificial Intelligence techniques, allows to detect very subtle changes in tissues that are not visible to the human eye. These changes could be relevant information of the microstructure of the tissue related to a pathology.

The uterine cervix is a potential candidate for the application of this type of technology, since it must be remodeled during pregnancy until the moment of delivery. The process of cervical remodeling consists of microstructural changes of the cervix that begin in the first trimester of pregnancy and end in childbirth.

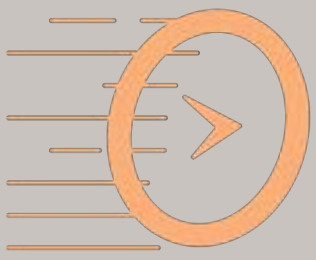
Early or premature remodeling of the cervix may be related to PTB. Thus, early identification of a premature cervical remodeling process could reduce the possible maternal and perinatal complications associated with PTB.

quantusPREMATURITY provides an early detection alternative for reliable risk prediction of PTB; reaching levels of accuracy, performance and reproducibility unprecedented in the state of the art.

quantus PREMATURITY

Precise

Effective



Fast

If you want to try it
Contact us!

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CE

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