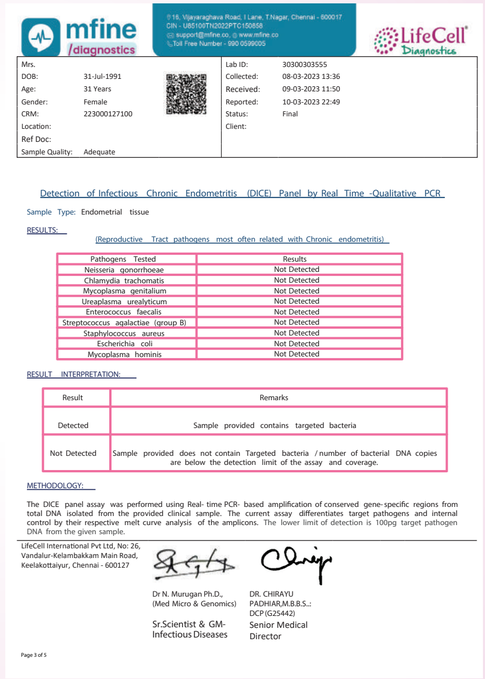
Report & What Next

The DICE report will focus on qualitative detection of chronic endometritis-causing bacteria in the given sample of the patient.

Sample Type: Endometrial tissue , Endometrial Wash & Infilitrate

The report will offer individualized recommendations for aiding treatment with the appropriate antibiotics and probiotics.



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support@mfine.co, www.mfine.co
Toll Free Number - 999 0599005

LifeCell Diagnostics

Mrs.		Lab ID:	30300303555
DOB:	31-Jul-1991	Collected:	08-03-2023 13:36
Age:	31 Years	Received:	09-03-2023 11:50
Gender:	Female	Reported:	10-03-2023 22:49
CRM:	223000127100	Status:	Final
Location:		Client:	
Ref Doc:			
Sample Quality:	Adequate		

Detection of Infectious Chronic Endometritis (DICE) Panel by Real Time -Qualitative PCR

Sample Type: Endometrial tissue

RESULTS:

(Reproductive Tract pathogens most often related with Chronic endometritis)

Pathogens Tested	Results
Neisseria gonorrhoeae	Not Detected
Chlamydia trachomatis	Not Detected
Mycoplasma genitalium	Not Detected
Ureaplasma urealyticum	Not Detected
Enterococcus faecalis	Not Detected
Streptococcus agalactiae (group B)	Not Detected
Staphylococcus aureus	Not Detected
Escherichia coli	Not Detected
Mycoplasma hominis	Not Detected

RESULT INTERPRETATION:

Result	Remarks
Detected	Sample provided contains targeted bacteria
Not Detected	Sample provided does not contain Targeted bacteria / number of bacterial DNA copies are below the detection limit of the assay and coverage.

METHODOLOGY:

The DICE panel assay was performed using Real- time PCR- based amplification of conserved gene-specific regions from total DNA isolated from the provided clinical sample. The current assay differentiates target pathogens and internal control by their respective melt curve analysis of the amplicons. The lower limit of detection is 100pg target pathogen DNA from the given sample.

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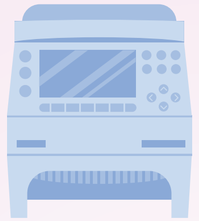
Supplementary Tests

Name of Test	Name of Pathogens
DICE-TB PCR Plus panel (Qualitative) by Real Time PCR-Test Code : DICETBPNL	Neisseria gonorrhoeae, Chlamydia trachomatis, Enterococcus faecalis, Streptococcus agalactiae (group B), Staphylococcus aureus , Escherichia coli, Mycoplasma genitalium, Ureaplasma urealyticum, Mycoplasma hominis & Mycobacterium tuberculosis and Non Tuberculosis Mycobacterium
DICE-TB Xpert Plus panel (Qualitative) by Real Time PCR -Test Code : DICETXPBPNL	Neisseria gonorrhoeae, Chlamydia trachomatis, Enterococcus faecalis, Streptococcus agalactiae (group B), Staphylococcus aureus ,Escherichia coli, Mycoplasma genitalium, Ureaplasma urealyticum, Mycoplasma hominis & Mycobacterium tuberculosis & Rifampicin Susceptibility



Advantage of RT PCR

- Faster results
- High Sensitivity & Specificity
- Detects Drug-resistant Tuberculosis
- Detects non-tuberculosis mycobacteria & M. Tuberculosis

Why Choose MFine ?

First in India
The DICE Panel is the first-of-its-kind comprehensive test to be launched in India

NABL & CAP Certified
Our labs are NABL & CAP certified and undergo regular inspections

Privacy & Confidentiality
Boasts state-of-the-art technology to ensure secure data storage

Clinically verified reports
Report interpretation by clinical experts

Coverage
Pan-India presence

References:

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https://www.researchgate.net/publication/331565482_Review_Chronic_endometritis_and_its_effect_on_reproduction
https://www.who.int/data/gho/indicator-metadata-registry/imr-details/women-of-reproductive-age-(15-49-years)-population-(thousands)

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LC/DIA/DICE/BROCH/ENG/0622/V001

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DICE Panel

A comprehensive panel for the Detection of Infectious Chronic Endometritis (DICE)

A life-changing step towards your reproductive health

Name of Salesperson: ..... Contact: .....

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What is Chronic Endometritis (CE)?

- It is a medical condition that causes recurring inflammation in the endometrial lining as a result of infection of the uterine cavity largely by bacterial pathogens .
- Unlike Acute cases, Chronic Endometritis is clinically silent (without any typical clinical or ultrasound findings), thereby, left unnoticed and untreated.
- In patients with unexplained recurrent miscarriageS, CE has been found causative in 9.3-67.6% cases. Whereas for patients with repeated implantation failure, the incidence of CE is as high as 14-67.5% and it affects upto 40% infertile women.
- Research has also highlighted its association with poor reproductive outcomes, in addition to obstetric and neonatal complications.
- Chronic Inflammation that surfaces as a result of long-standing endometritis can lead to formation of intrauterine adhesion or synechiae.

Chronic endometritis prevails in 2.8% to 56.8% infertile women & 9.3% to 67.6% women with recurrent pregnancy loss![1]

Current Methods Used for Diagnosis of Chronic Endometritis

01 Hysteroscopy of the uterine cavity which relies on subjective characteristics that suffers operator bias and usually over diagnoses the disease

02 Endometrial biopsy of the plasma cells in the endometrial stroma used for its histological identification, but has low specificity and usually under diagnoses the disease

03 Microbial culture to isolate and identify the causative pathogen, is an objective method but 20% to 60% bacterial pathogens causing CE cannot be cultured in-vitro and this method suffers from increased turnaround time

Introducing MFine Diagnostics

Detection of Infectious Chronic Endometritis (DICE) Panel

A new approach to improve detection of endometrial pathology causing Infectious Chronic Endometritis by identifying specific microorganisms to ensure:

- Guided personalized treatment to the affected, thereby, empowering clinicians in treating one of the root causes of infertility
- Timely intervention to prevent implantation failure, recurrent pregnancy losses and in some cases, ectopic pregnancies
- Prevention of adverse pregnancy outcomes
- Sexual and reproductive health awareness in women

What is the DICE Panel?

A comprehensive panel to detect pathogenic bacteria responsible for causing chronic endometritis with the help of the molecular diagnostic method, RT-PCR (Reverse Transcription Polymerase Chain Reaction).

DNA is extracted from an Endometrial biopsy sample followed by amplification and detection of the bacterial 16S ribosomal RNA gene. This gene is conserved in the CE-causing bacteria and presents nine variable regions and by analyzing the specific DNA sequences, their presence in the sample can be qualitatively ascertained.

Advancements in molecular biology and its application helps overcome the biased detection offered by individual conventional methods and offers equivalent yield offered collectively by them.

Offers accurate identification of culturable and nonculturable endometrial pathogens.

RT-PCR is highly sensitive and can identify and quantify very small amounts of bacterial DNA.

It detects bacterial DNA instead of live bacteria, allowing detection of chronic endometritis pathogens in frozen or fixed samples, facilitating sample collection and storage while avoiding contamination during sample transportation.

Being a rapid assay, RT-PCR gives comparable results to bacterial culture with turnaround time of 24 hours.

Acts as a fast, accurate and inexpensive diagnostic tool with sensitivity of 95% and specificity of 98.5%.

Pathogens covered in the DICE Panel

Neisseria gonorrhea	Chlamydia trachomatis	Enterococcus feacalis
Escherichia coli	Streptococcus aureus	Staphylococcus aagalatiae
Mycoplasma genatalium	Ureaplasma urealyticum	Mycoplasma hominis

DICE TEST REQUIRES ONLY A SMALL ENDOMETRIAL SAMPLE

Following steps are required for testing:

01 Collection of the endometrial sample

02 DNA extraction from the sample

03 Bacterial analysis using RT- PCR

04 Result

Who Should Take the DICE Panel?

- Beneficial to patients since it assesses issues with the embryo's microbial environment in the endometrium after implantation
- With a history of Recurrent Implantation Failure (RIF) even after choosing a healthy embryo
- Experiencing Recurrent Pregnancy Losses (RPL)
- Undergoing Assisted Reproduction Treatment (ART)
- Wishing to conceive