

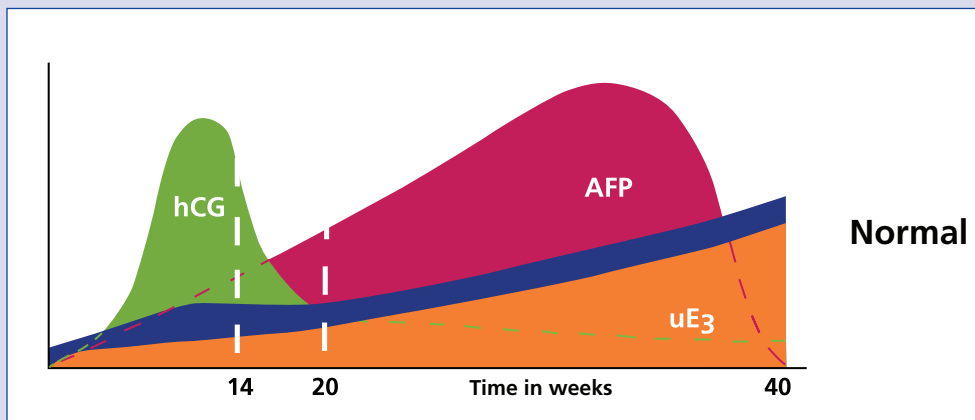
Prenatal Genetic Testing Services

UMass Memorial Laboratories Inc.



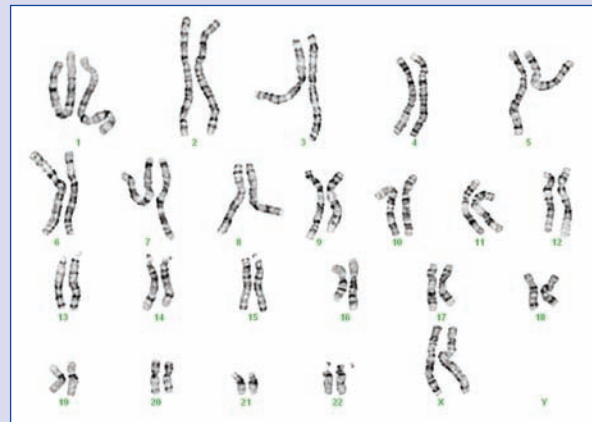
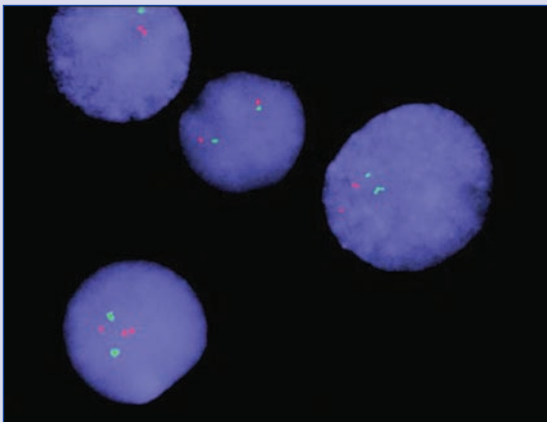
Maternal Serum and Amniotic Fluid Screening

- ◆ Testing is available for pregnancies at risk for Down syndrome, Trisomy 18 and open neural tube defects using maternal serum levels of alpha-fetoprotein (AFP), human chorionic gonadotropin (hCG), unconjugated estriol (uE3), and dimeric inhibin A (DIA)
- ◆ Patient brochures are available in English and Spanish to answer commonly asked questions and assist in patient counseling
- ◆ We provide electronic test ordering and real-time results distribution
- ◆ Abnormal results are communicated directly to providers to minimize turnaround time
- ◆ Amniotic fluid AFP and acetylcholinesterase (AChE) assays are utilized for open neural tube defect diagnosis



Chromosome and FISH Analysis

- ◆ The Cytogenetics Labs at UMass Memorial has performed testing on over 10,000 amniotic fluid samples
- ◆ We have experience in molecular cytogenetic methodologies including FISH
- ◆ Cytogenetic testing can be performed on peripheral blood, amniotic fluid, cord blood, and products of conception
- ◆ Test results are usually available within 10 days of specimen receipt
- ◆ Expedited test results are available on newborns with congenital abnormalities
- ◆ Testing is available for patients experiencing infertility or recurrent pregnancy loss
- ◆ Cell culturing services are available for molecular and biochemical testing performed off-site
- ◆ Board-certified Cytogeneticists and Genetic Counselors are available for consultation



DNA Analysis/Molecular Diagnostic Testing"

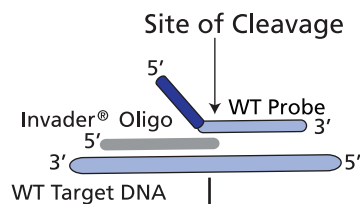
- ◆ Cystic Fibrosis, Ashkenazi Jewish, and other carrier testing is available on parental peripheral blood specimens
- ◆ A broad range of other molecular genetic testing is also available for prenatal specimens and patients
- ◆ Genetic counselors are available to help interpret results, counsel patients, and recommend follow-up testing when appropriate

Invader[®] assay Technology

A.

Invasive structure forms from single-base overlap between Invader[®]Oligo and WT Probe when hybridized to WT Target DNA.

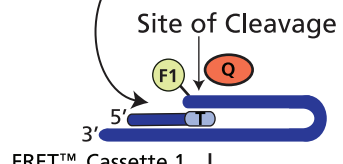
Primary Reaction



Cleavage

Released 5' Flap 1

Secondary Reaction

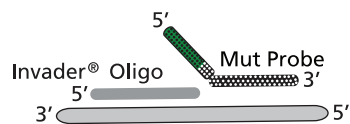


Cleavage

Fluorescent Signal

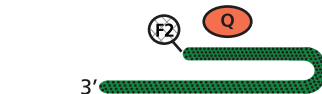
B.

Mismatch between Mut Probe and WT Target DNA prevents single-base overlap; therefore, no invasive structure is formed.



WT Target DNA

No Cleavage



FRET[™] Cassette 2

No Cleavage

No Fluorescent Signal

Genetic Counseling Services

- ◆ Board-certified Genetic Counselors are available for inquiries regarding test ordering and results interpretation
- ◆ Genetic Counselor referral program
- ◆ Commitment to patient education and awareness



Why Use UMass Memorial Laboratories for Prenatal Diagnosis?

- ◆ Over 20 years of prenatal genetic testing experience
- ◆ One convenient source for genetic testing
- ◆ Cost-effective testing for today's healthcare environment
- ◆ Rapid turnaround time
- ◆ Genetic counselling and other support services for providers and patients

UMass Memorial Laboratories is the largest laboratory services provider in New England. Serving more than 900 physicians and hospitals, the lab has three sites in Worcester, including a regional 38,000 square foot, state-of-the-art facility. The leader in laboratory services throughout the region.

UMass Memorial Laboratories provides:

- ◆ Full access to laboratory MD and PhD-level professionals for consultations
- ◆ Full-service customer support service center with on-call Director coverage that is open 24 hours per day, 7 days per week, 365 days per year



Genetics Laboratory Personnel

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Laboratory Licensure

NATIONAL
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CAP-certified

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Massachusetts