

# Genomics and AI in Prenatal Care

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11-12 September 2024, Congress Center, Basel, Switzerland

# Genetics



*Before*

*During*



*After*

# Genomics

# Genetics

# Epigenetics

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# Genomics



Biology Compute  
Clinic



*Reach better decision*

# Genomics

## Read and Understand



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1 Genome: 1B USD and 10 years to



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Year: 2024

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1 Genome: 1B USD and 10 years to 100 USD and 1 day

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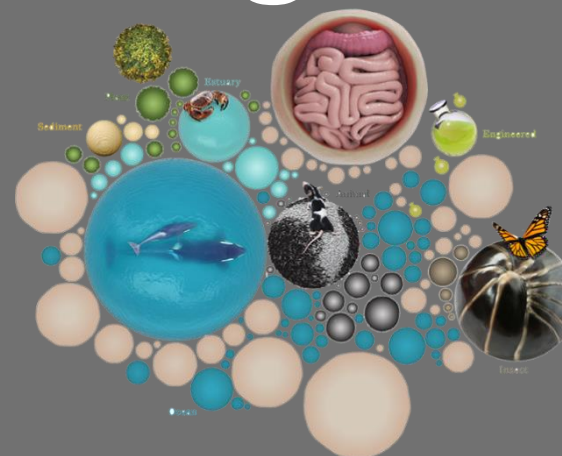


# Biology



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# Digital



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# Digital

# AI

# Biology

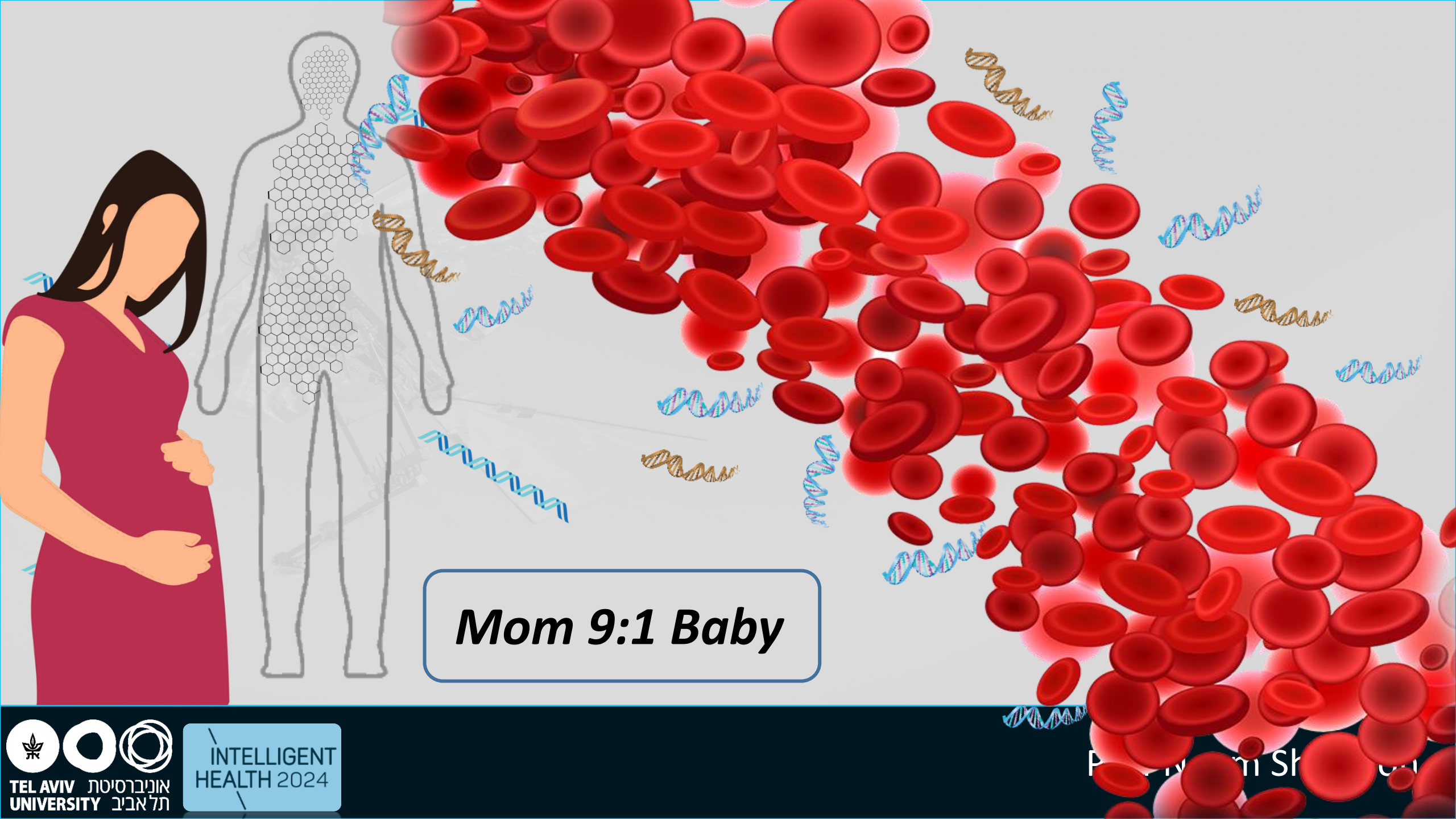


# Genomics



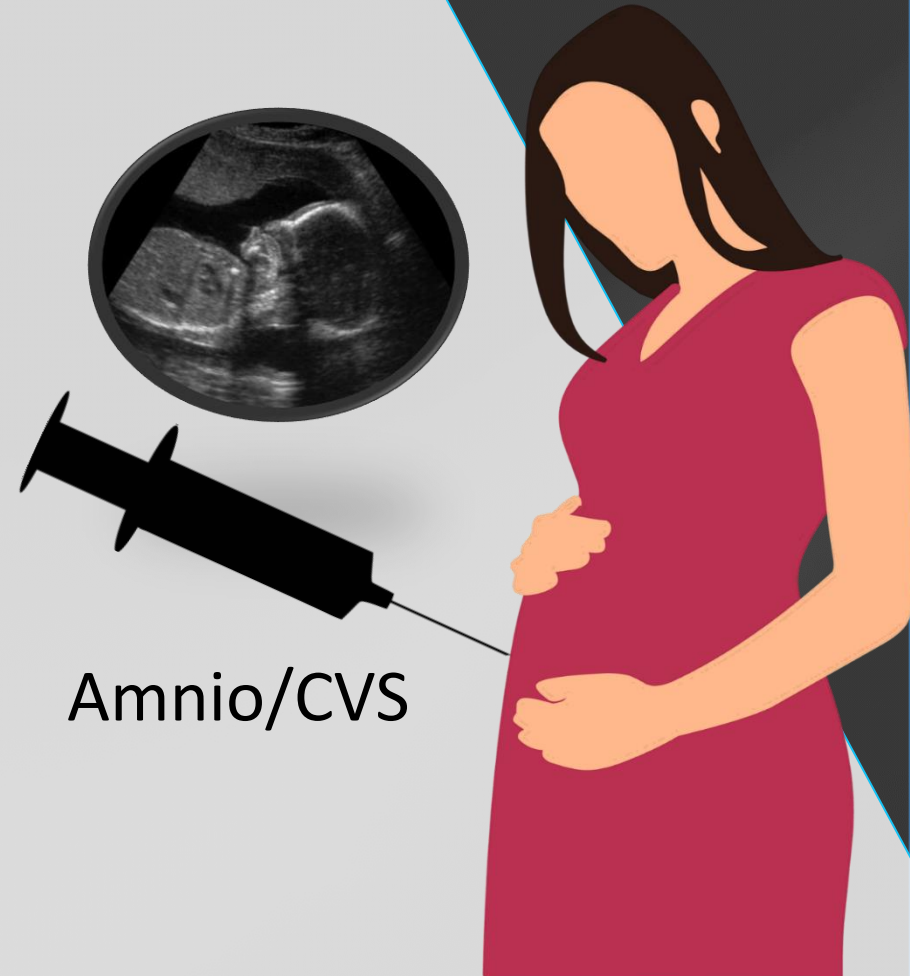
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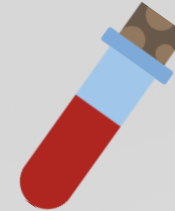
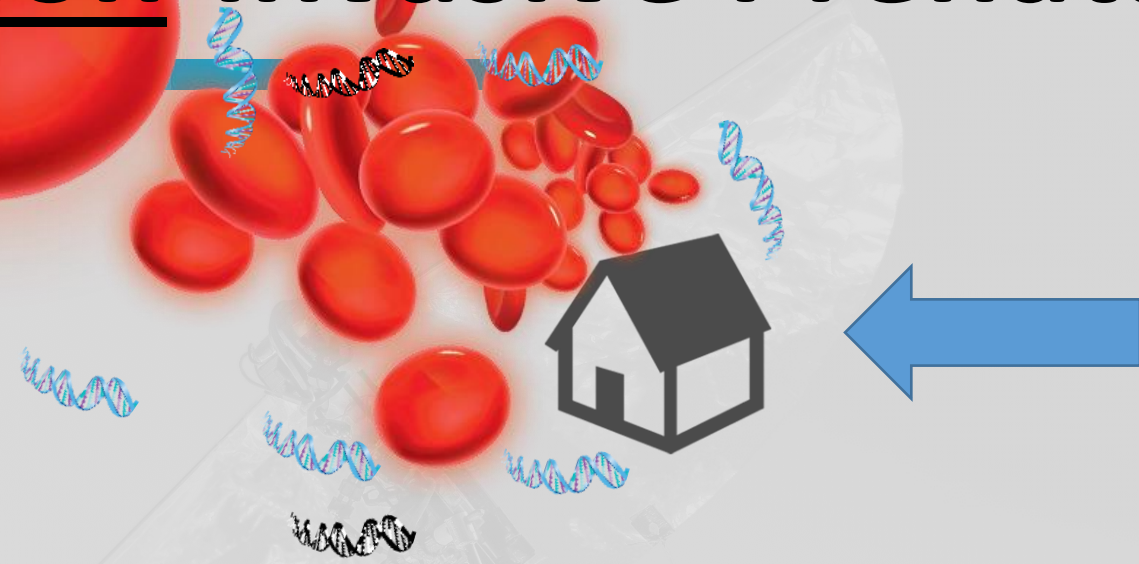
**Mom 9:1 Baby**

# Invasive Prenatal Testing

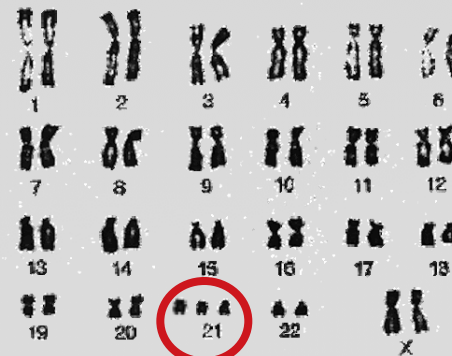


Amnio/CVS

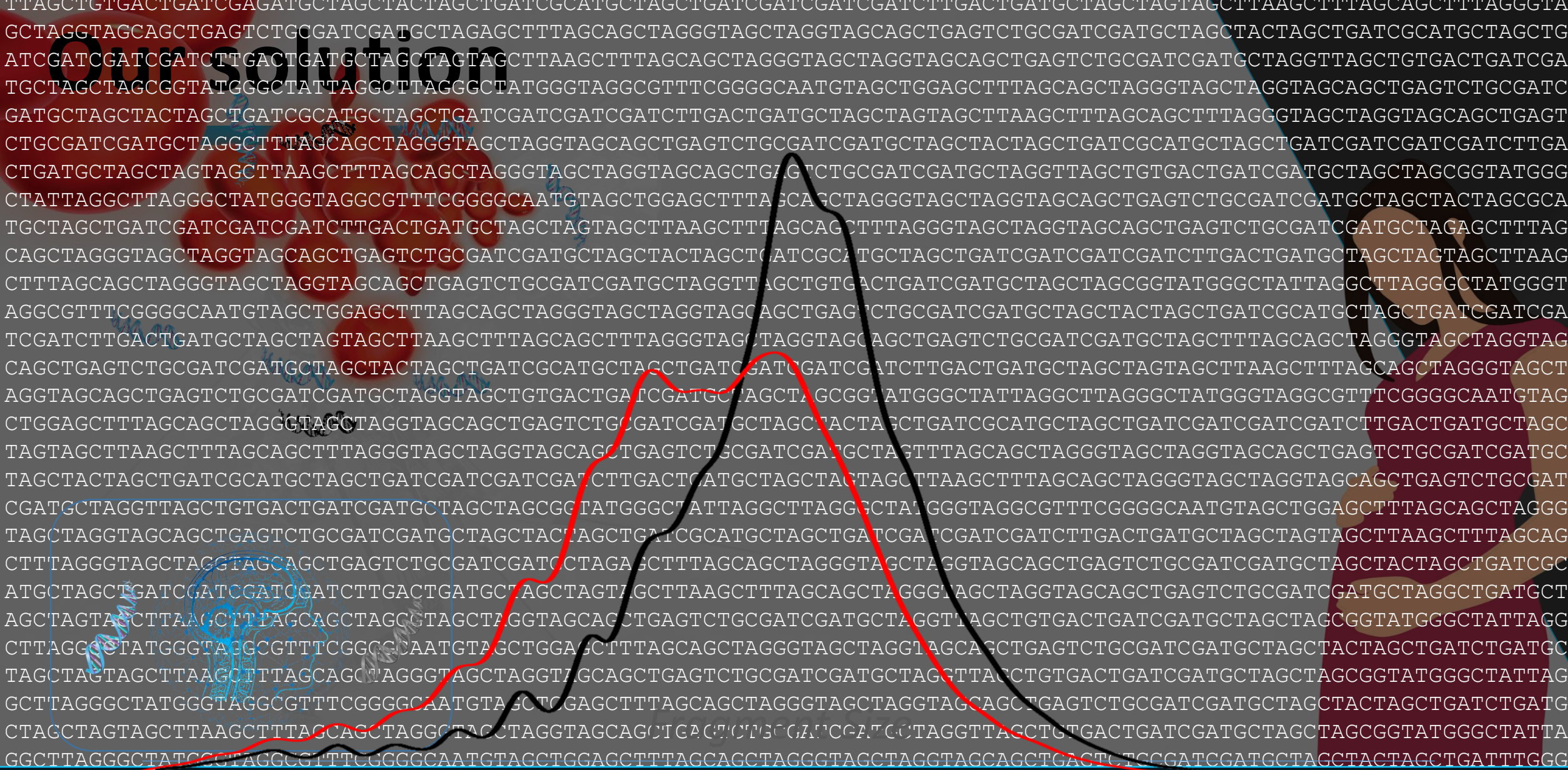
# Non-Invasive Prenatal Testing



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# Our solution



**3 Billion nt at 99.5%**

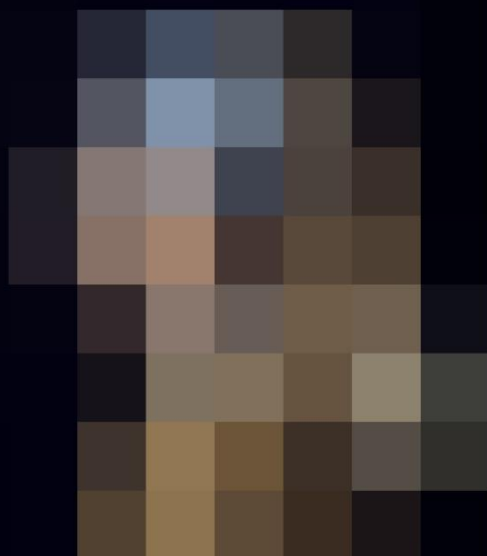
**Prof Noam Shomron**  
Publication and Patent







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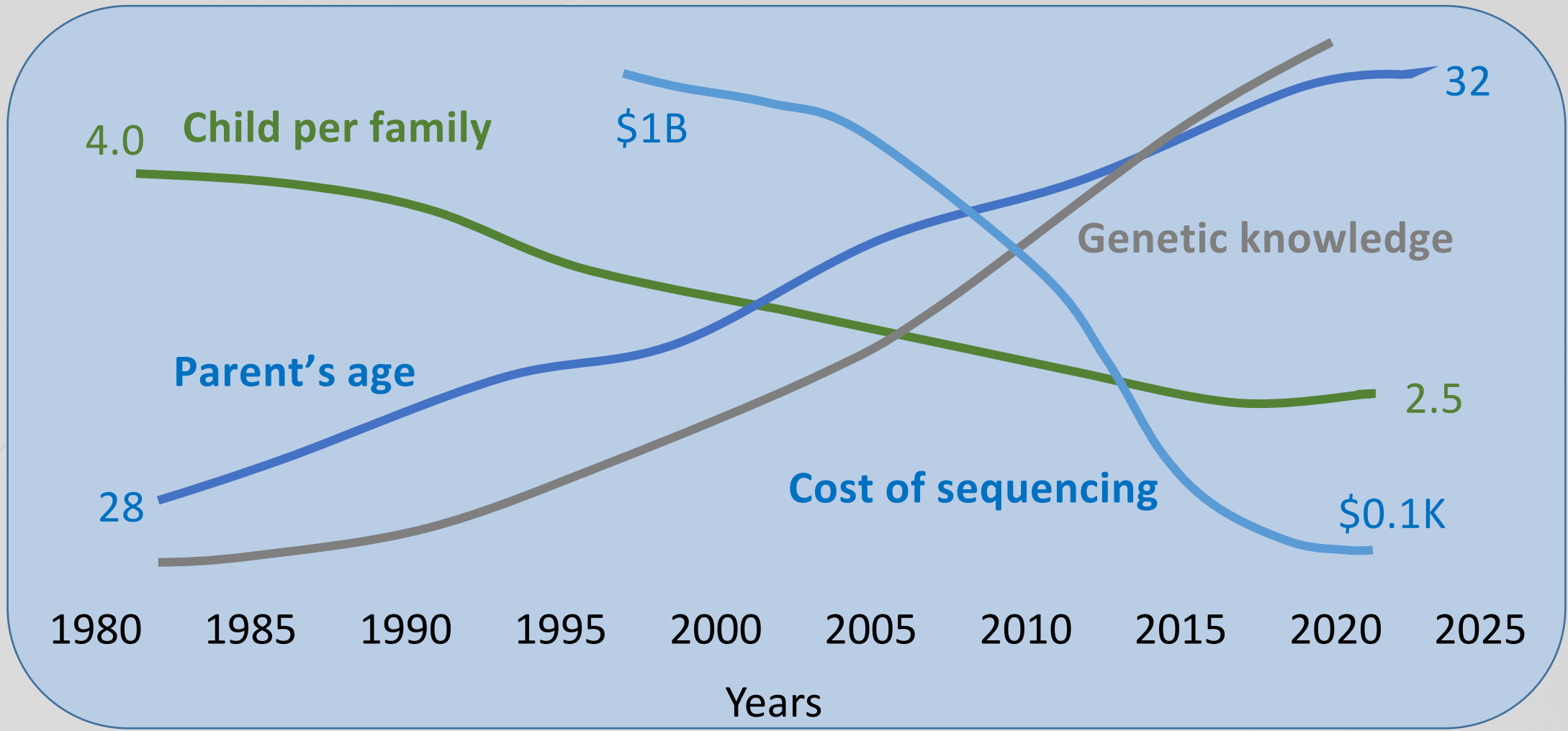
# The Need



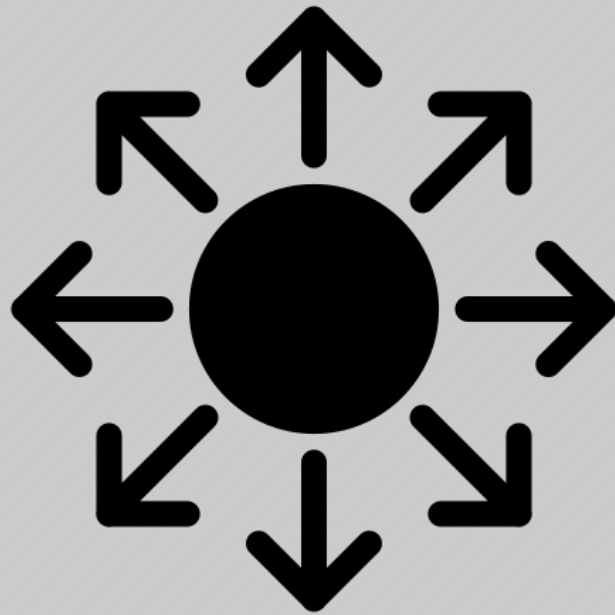
*1% of all pregnancies carry disorder-related mutations  
Currently only 10% are detected*

*US market reached a point where week 13 is a critical  
decision point*

*Values are aligned for Parents, OB-GYN, Geneticists,  
Government, and Payers*



# Comprehensive

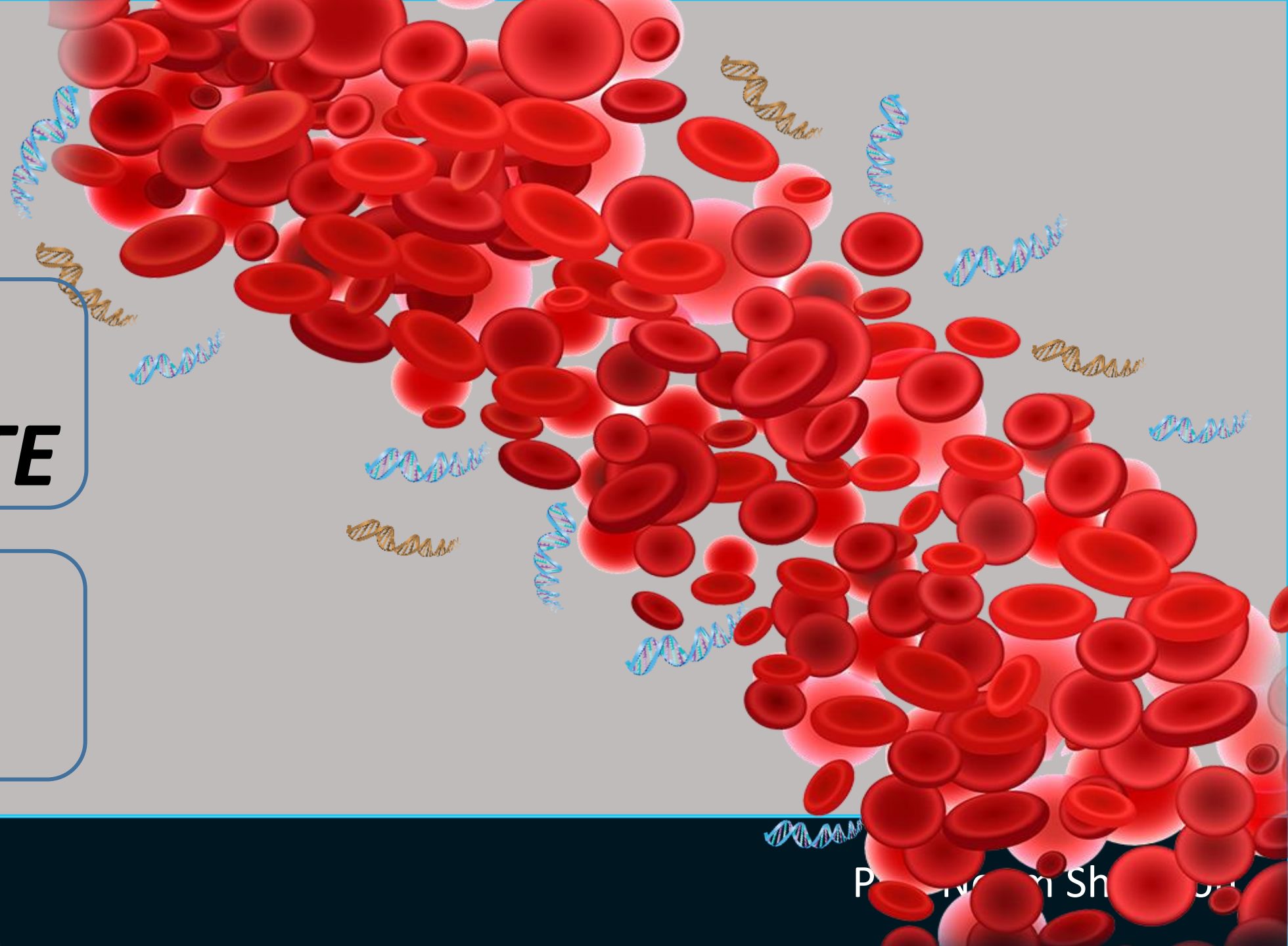


# Early



# Risk-free

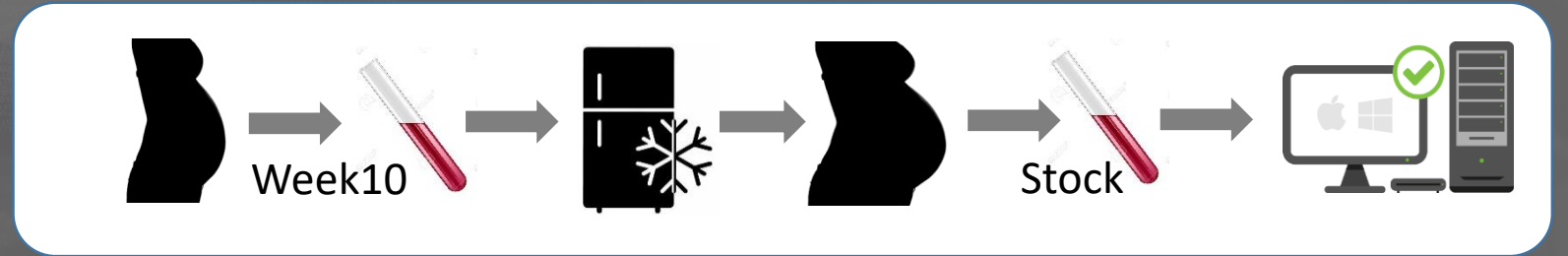




***DATA  
COMPUTE***

***DNA  
RNA***

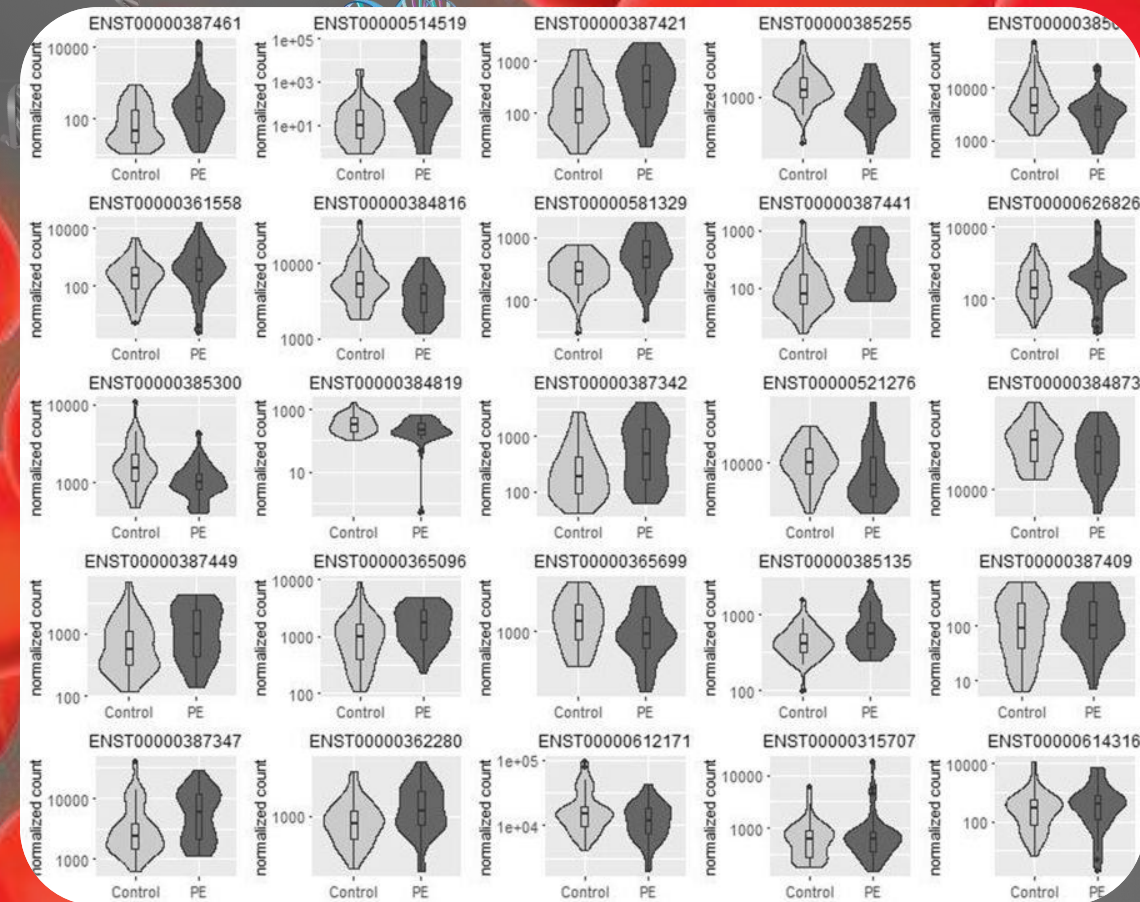
# Early detection of Preeclampsia



# Early detection of Preeclampsia



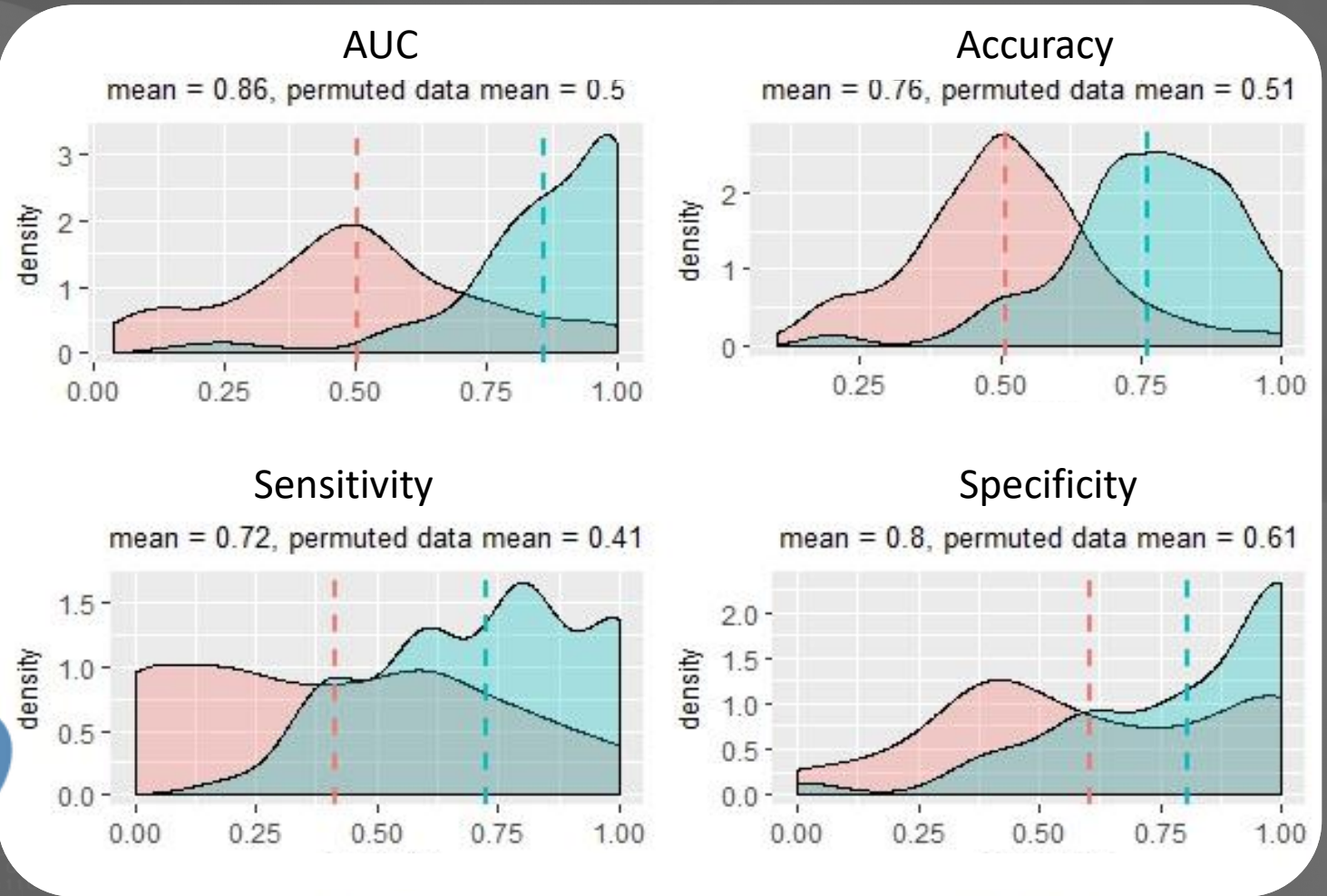
Dr Liron Yoffe  
Prof Moshe Hod  
Prof Eran Hadar



**Small RNA**

# Early detection of Preeclampsia

*Small RNA*

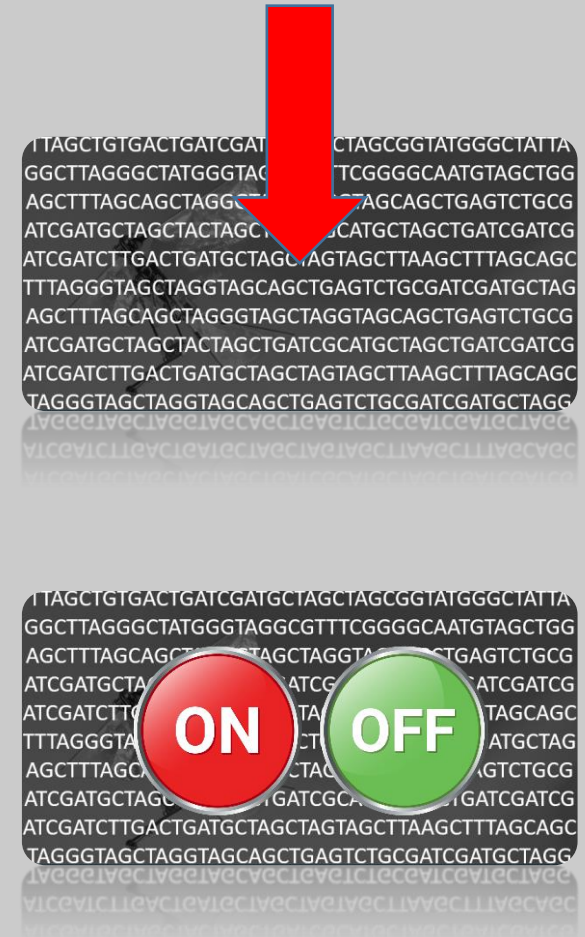




# AI in Genomics



*Reach better  
decisions, early*



# A dynamic world



# Team Shomron: the best in the world in trying



# Genetics and Genomics



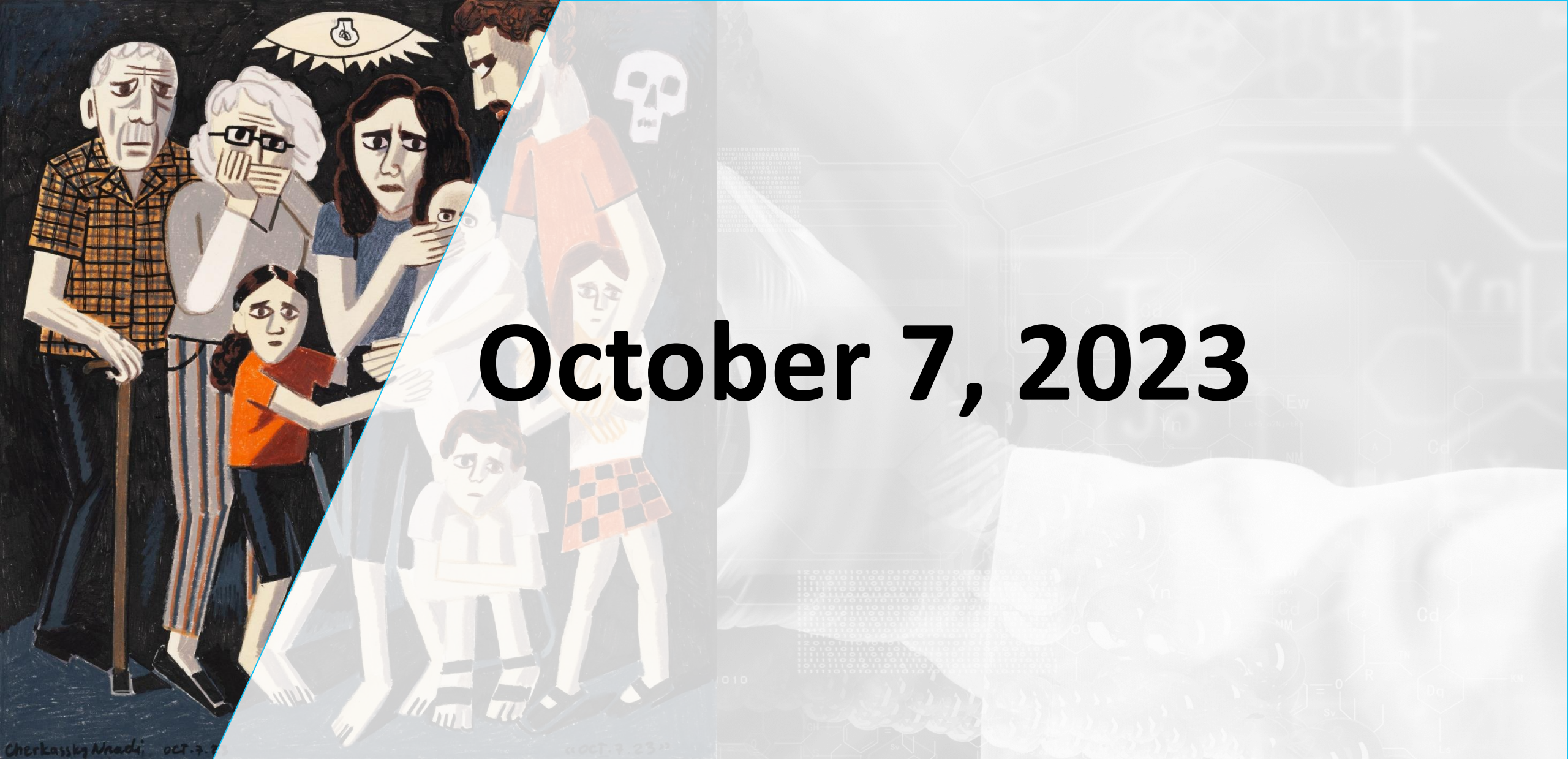
*Before*

*During*



*After*



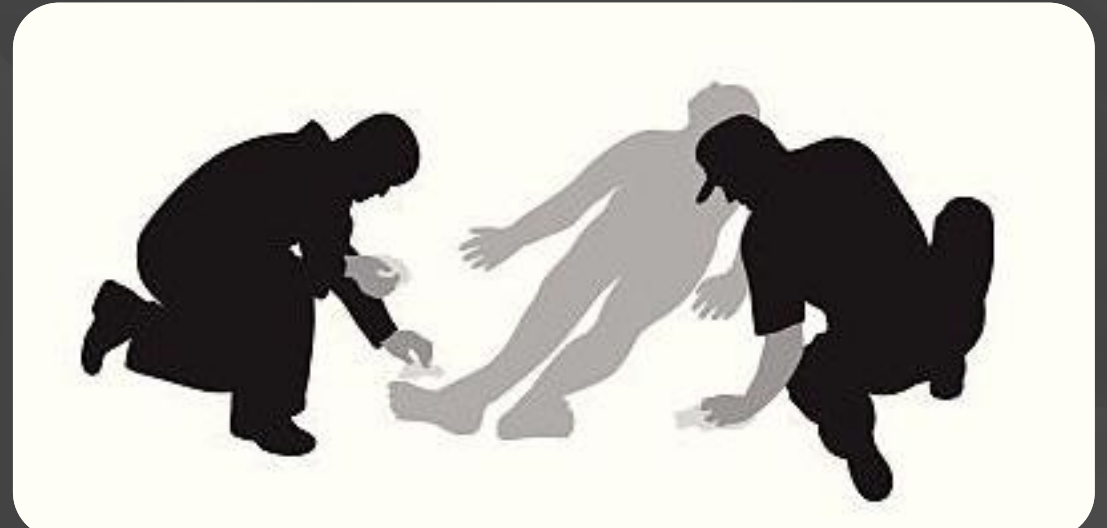


**October 7, 2023**

# Day job



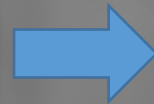
# Night job



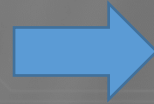
# Medicine – AI – Forensic



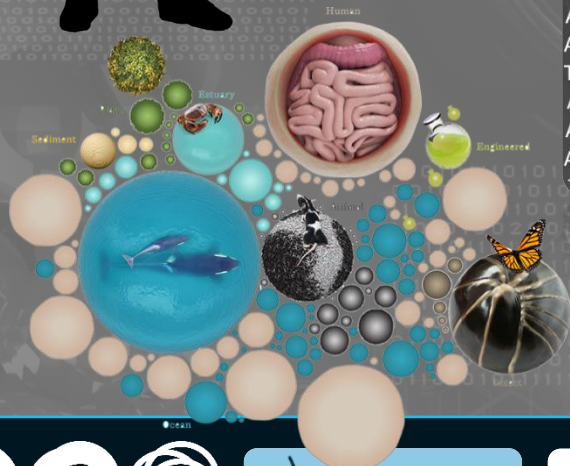
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```



**Medical *Disease DB***



**Forensic *Internal DB***









**MEN. WOMEN. BABIES. ELDERLY.**  
**STILL HELD HOSTAGE**  
**#BringThemHomeNow**

**מטה המשפחות להחזרת החטופים והנעדרים**