



Individualized medicine in infectious diseases

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To see a world in a grain of sand...

- All humans are 99.9% identical
 - Of the 0.1% difference:
 - 94% of variation is among individuals from the same populations
 - 6% is between individuals from different populations



What is individualized medicine anyway?

- **Personalized medicine**
- Precision medicine
- Stratified medicine



- “A medical model **that separates patients into different groups**—with medical **decisions, practices, interventions** and/or **products** being tailored to the individual patient based on their predicted response or risk of disease.”

So obvious, yet so unknown

- Why didn't we care about this before?
 - We wanted to, but couldn't:
 - Genomic capabilities
 - Evidence-based medicine
 - Not a lot of time (dawn of our modern medicine evolution)
- But we need to now:
 - Patient populations rapidly changing
 - Obesity
 - Critically ill
 - Immunosuppressed
 - Parity in medicine
 - Extrapolation of data from one privileged group no longer OK





So, let's go!