



AI

# Transforming Healthcare with artificial intelligence

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What is artificial intelligence?



# Amplifying human ingenuity with intelligent technology



## Reasoning

Learn and form conclusions  
with imperfect data



## Understanding

Interpret meaning of data  
including text, voice, images



## Interacting

Interact with people  
in natural ways

Why now?

Regulating the internet giants

# The world's most valuable resource is no longer oil, but data

*The data economy demands a new approach to antitrust rules*



David Parkins

Print edition | Leaders >

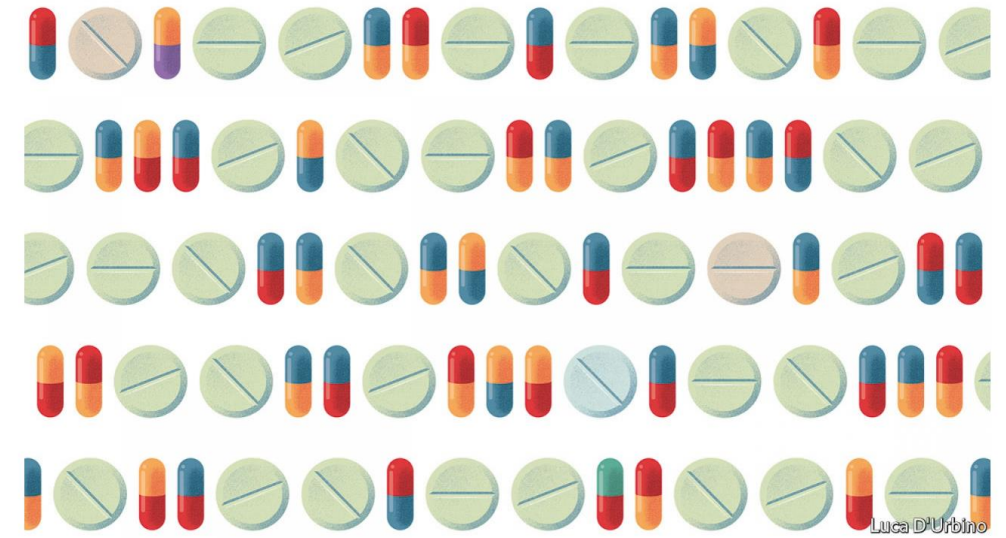
May 6th 2017



Data and medicine

# A revolution in health care is coming

*Welcome to Doctor You*



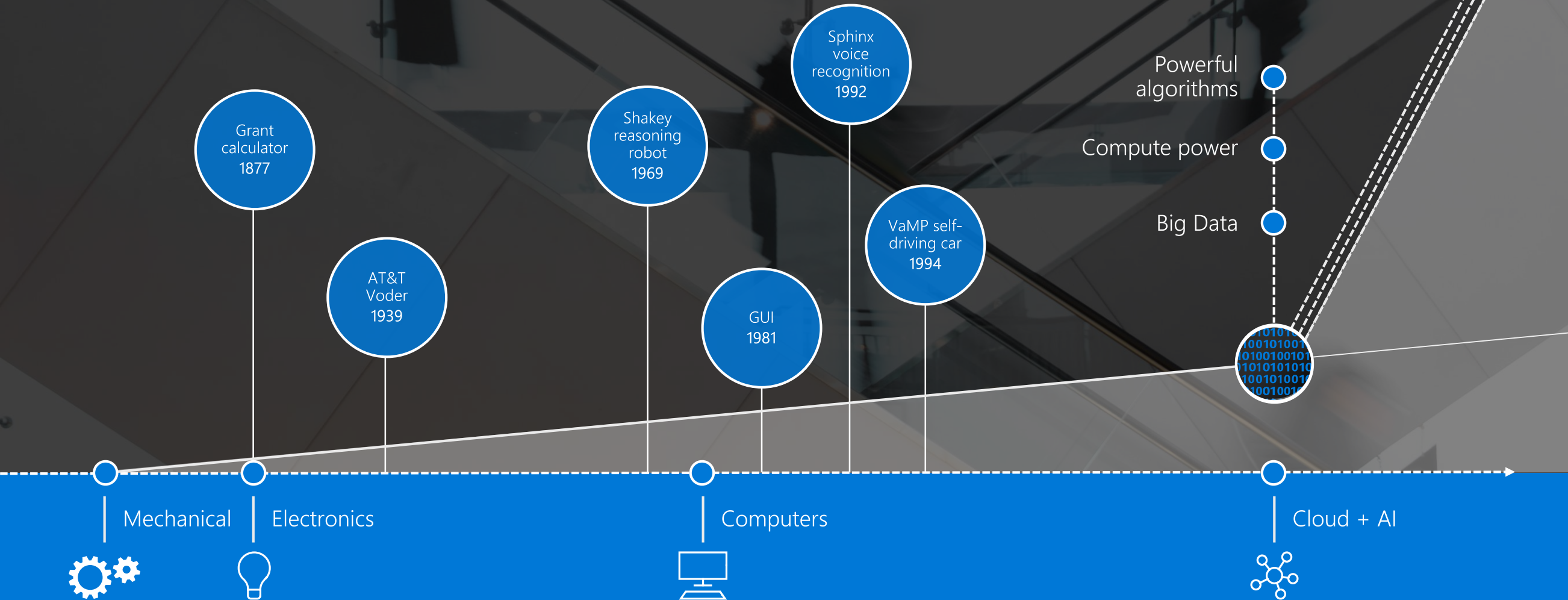
Luca D'Urbino

Print edition | Leaders >

Feb 1st 2018



# Why now?



AI in Healthcare?

# Explore top use cases within clinical and operational analytics:

## Clinical Analytics:

Transform data into prescriptive insights

## Operational Analytics

Gain actionable insights to optimize performance





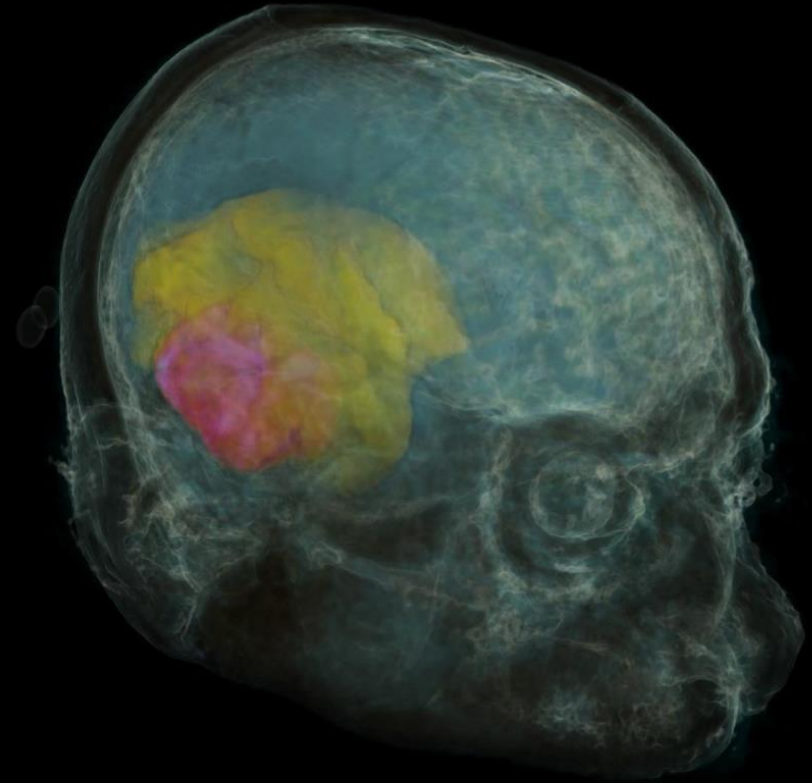


Half of us will be diagnosed with cancer

Half of those will need radiotherapy

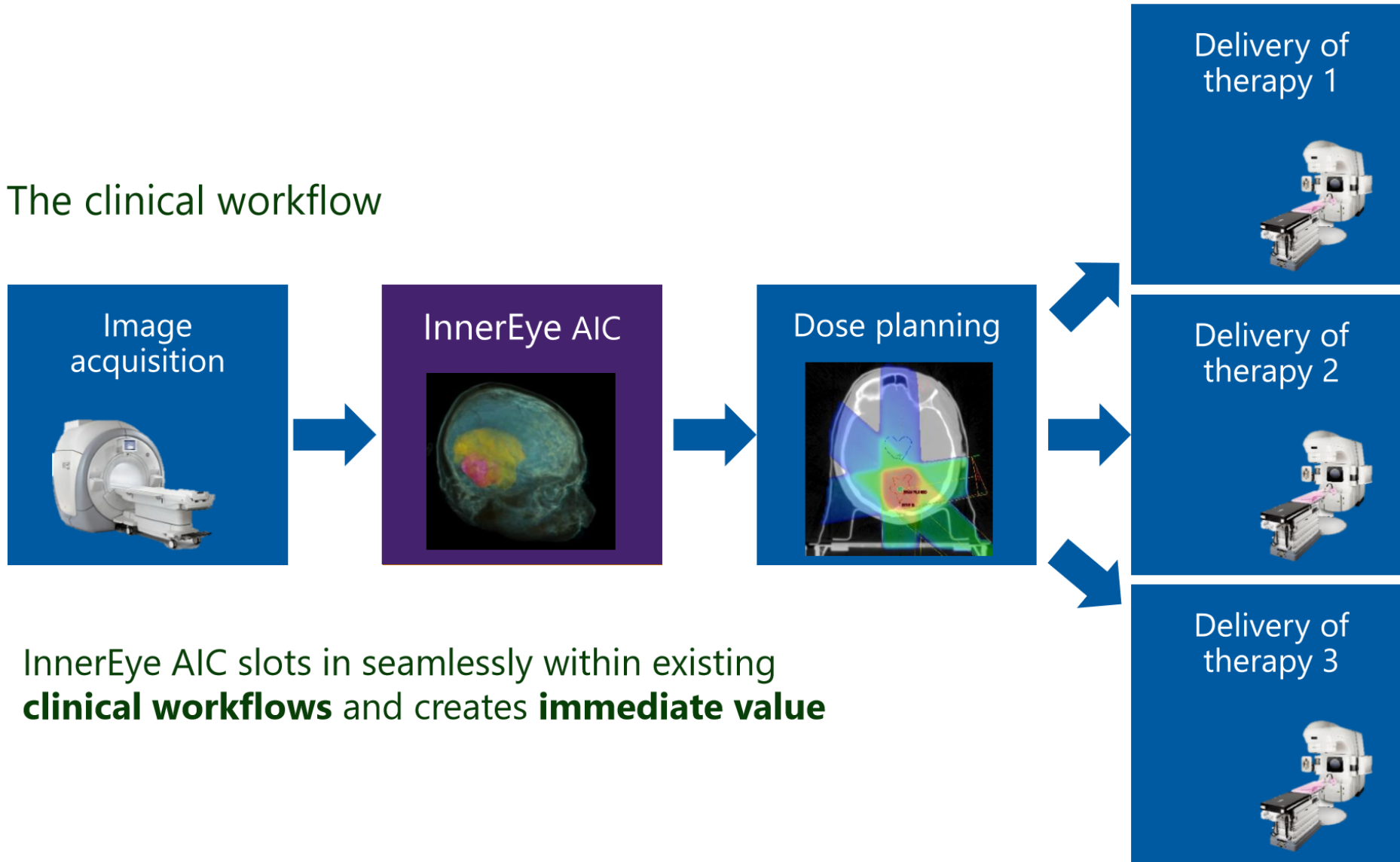
It takes hours for each patient

How can AI help ?



# Project InnerEye – Advanced Image Contouring

The clinical workflow



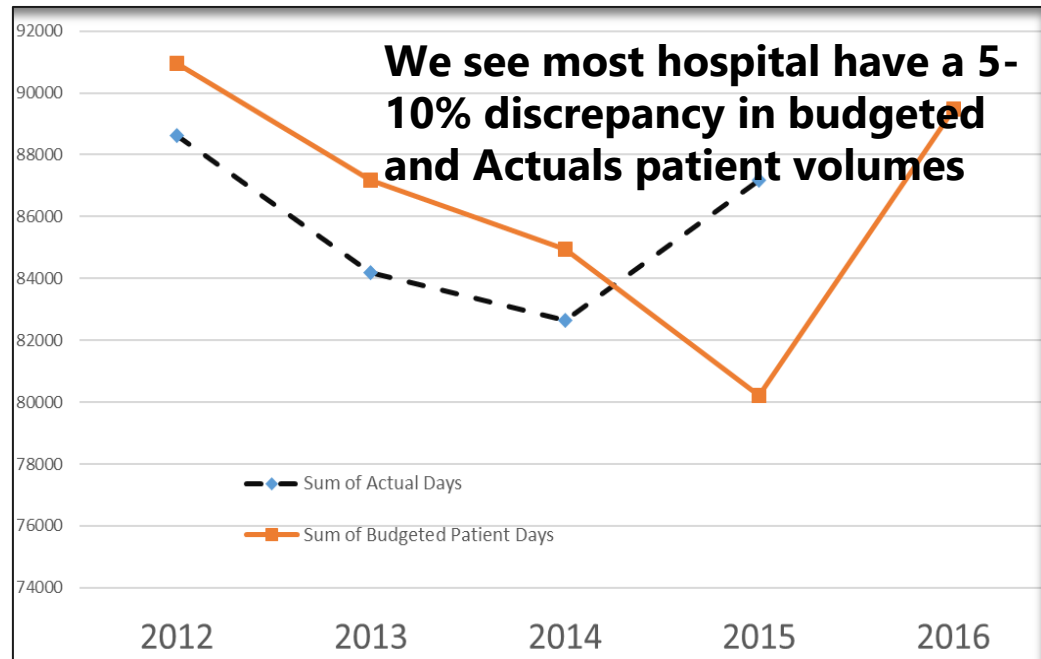
InnerEye AIC slots in seamlessly within existing **clinical workflows** and creates **immediate value**



*"What used to take hours can now be done in minutes"*

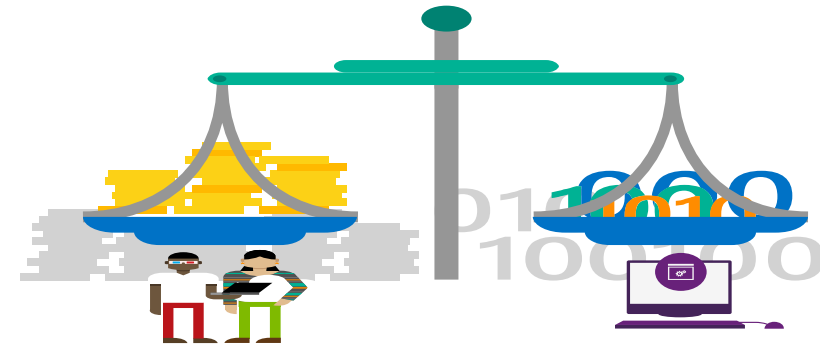
*Dr. R. Jena, Radiation Oncologist, University of Cambridge Hospitals*

# Better Volume Forecasting with Machine Learning



- This leads to low probability of reacting operationally
- Hospitals are focused on getting better prediction models and Azure ML provides an alternate that we have successfully used

## Budget Process vs Predictive Model Process



### Current Manual Process

- Labor intensive
- Once a year
- Forecast 12 months

### Using ML Model

- More consistent
- Takes an hour for one person to run
- Can be more automated
- Monthly, quarterly, yearly forecasts
- Can run as frequently as necessary
- Can forecast 18 months out

# AI is a journey



# Does more spent on EMR = more health?



= ?



## The ROI is in the data!



Thank You