

APEHRC 2019
in collaboration with **GDHP**
16 – 19 Oct 2019 | Hong Kong Science Park

The Next Big Thing
in eHealth



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EVENT
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GLOBAL DIGITAL HEALTH
PARTNERSHIP

Health Care Promotion with Predictive Intelligence

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19 October 2019



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學



Artificial Intelligence in Healthcare



(Source: Data Driven Investor, A Medium Corporation)

Google Deepmind | AlphaGo | Deepmind Health



(Source: Deepmind, Google)

IBM Deepblue | Watson | Watson Health



(Source: IBM)

Challenges and Opportunities

Bloomberg **Opinion**

Technology & Ideas

IBM's Watson Hasn't Beaten Cancer, But A.I. Still Has Promise

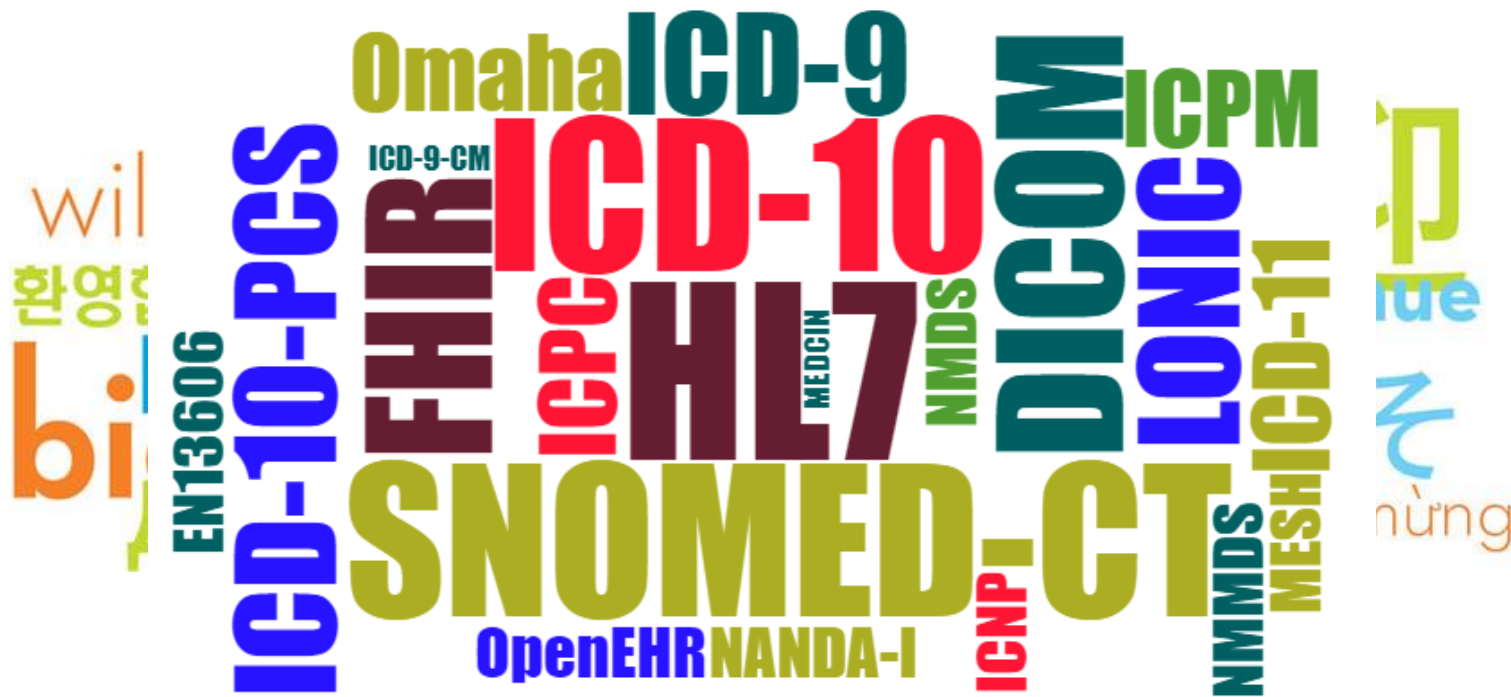
The company made bold claims that haven't yet panned out. But someday artificial intelligence could crack the code of individualized diagnosis and treatment.

By Faye Flam

August 24, 2018, 11:00 PM GMT+8



Standards and Interoperability

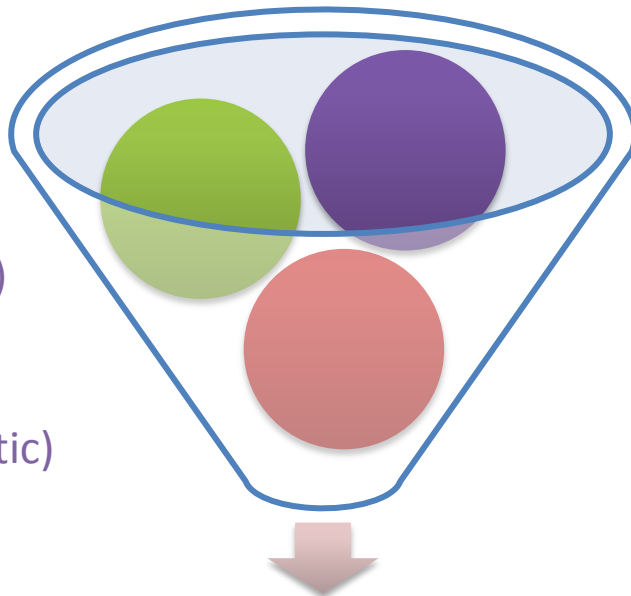


Predictive Intelligence in Healthcare

- Supervised Learning
- Prediction
 - Mortality after bladder cancer surgery
 - Bacterial Sepsis
 - Quality of life
 - Dementia risk

Five-year Mortality after Bladder Cancer Surgery

- Gender
- Age
- Albumen level
(≤ 39 g/L, >39 g/L)
- Surgical approach
(Open, MIS, Robotic)

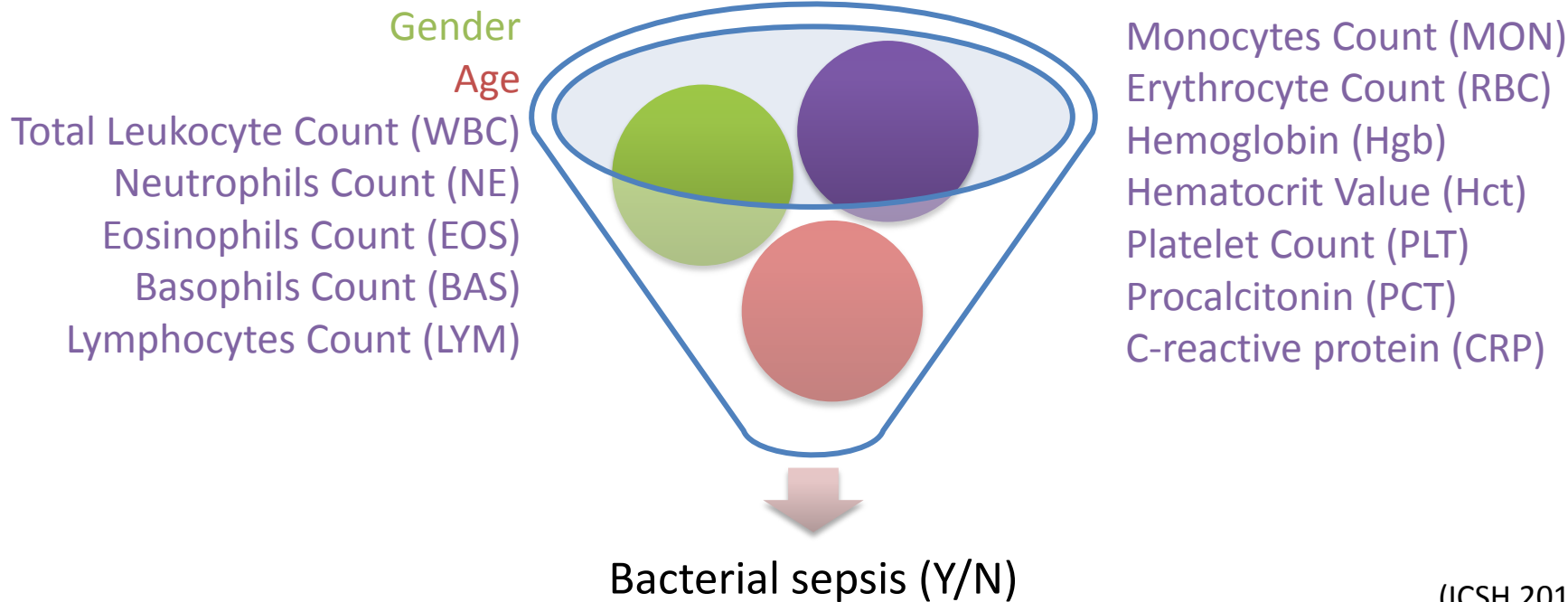


- Pre-operative serum albumin level
- Tumor stage (T1,T2,T3,T4)
- Diversion type (ileal conduit; Neo bladder)
- Follow-up period

5-year Mortality (Dead/Alive)

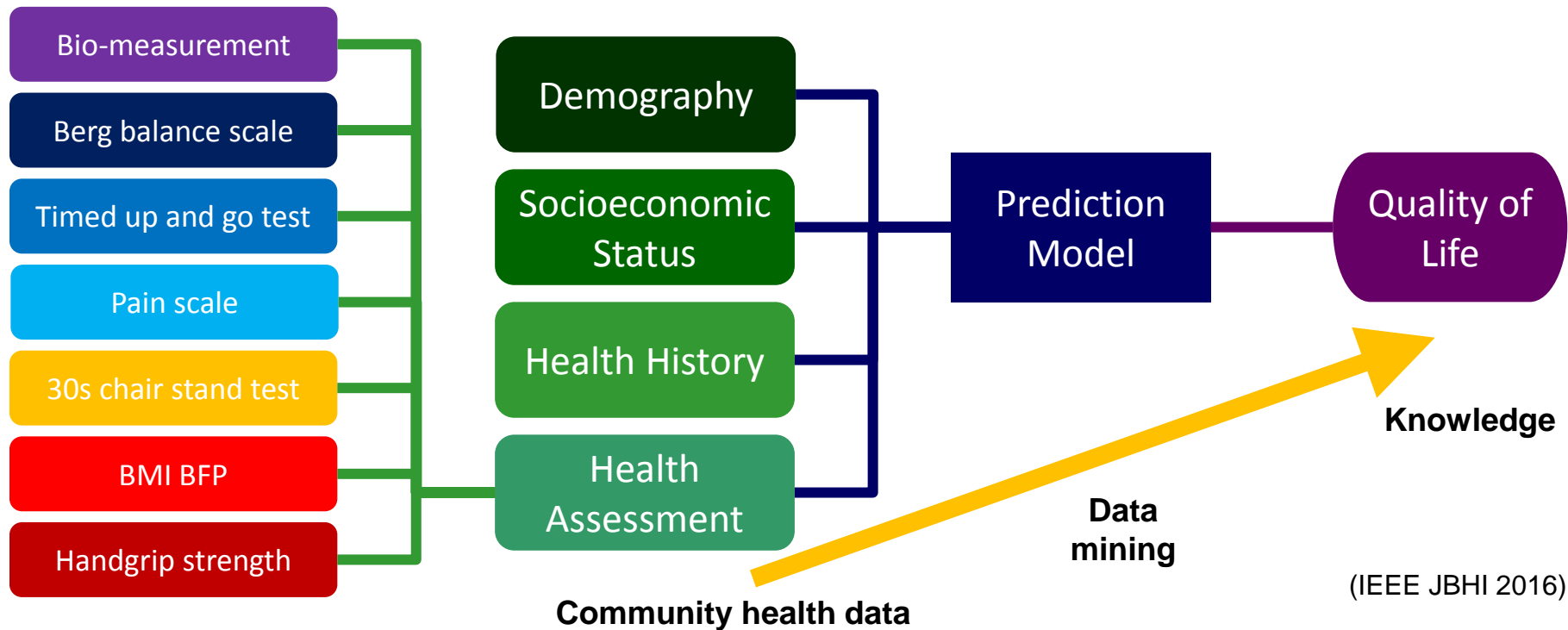
(CBM 2017)

Bacterial Sepsis



(ICSH 2017)

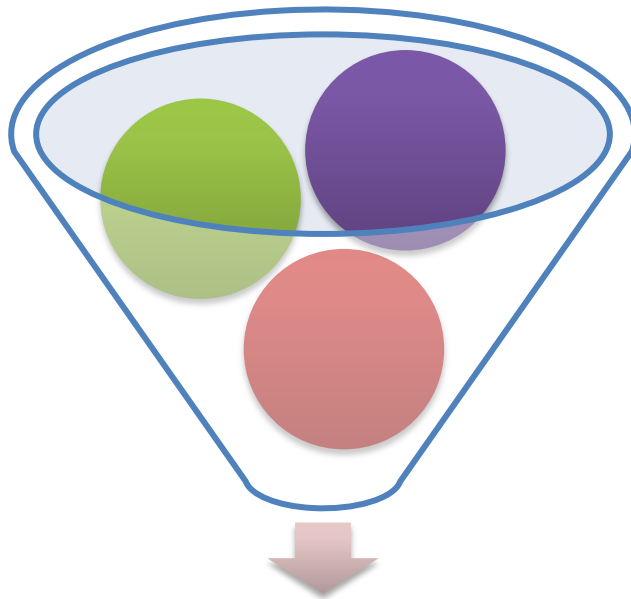
Elderly Quality of Life



Dementia Risk

Demographic
information

Bio-measurements



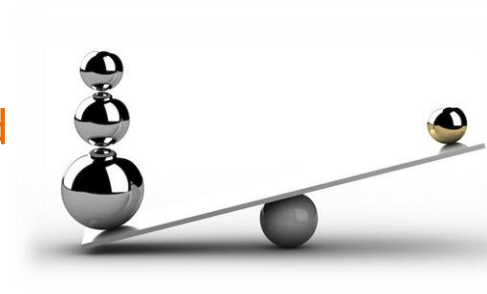
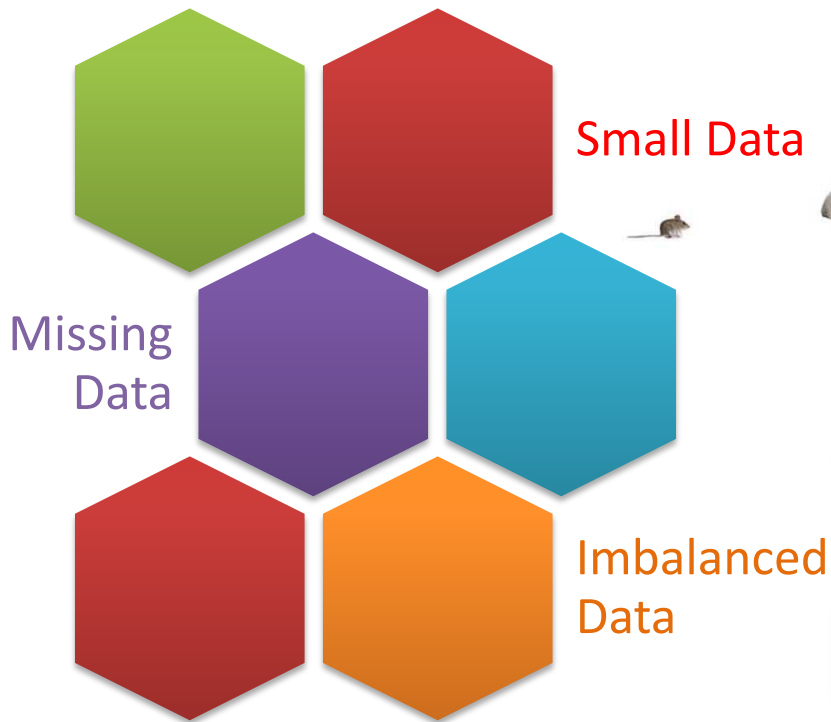
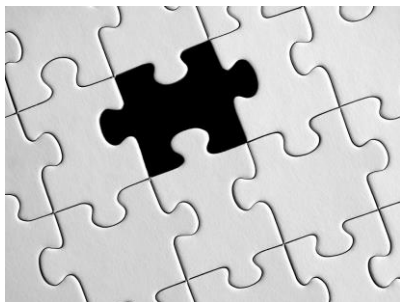
Dementia Risk

Data collected with
questionnaires:

- Mobility
- Nutrition
- Depression
- Happiness
- Pain, etc.

(ICSH 2017)

Data Integrity



Thank you for your attention!

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