# Developing Al in clinical settings



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## Assuta Medical Centers

Israel's largest and leading chain of private hospitals and medical centers



8 medical facilities nationwide



More than 1.25 Million patients annually

## Vision and Values











## Comprehensive, Precise Data

100,000+ Surgeries Performed Annually

17,000

orthopedic procedures 15,000

otolaryngologic procedures 13,000

gynecologic procedures

9,000

ophthalmologic procedures

9,000

urologic procedures 4,000

bariatric procedures 4,000

cardiac catheterization and electrophysiology procedures 1,000

cardiac chest surgeries



## 800,000+ Diagnostic Tests and Procedures Carried Out Each Year

200,000

CT scans

100,000

**MRI** scans

216,000

pathological tests 160,000

colonoscopies

150,000

ophthalmology tests 290,000

mammographies

50,000

**DEXA** scans







## 100,000+ Specialized Treatments Completed Yearly



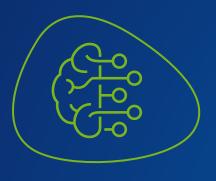
**21,000**IVF cycles



40,000 radiotherapy treatments



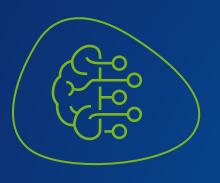
13,000 oncologic patients



## Al is affecting healthcare delivery

- Point of care
- Precision medicine
- Patient role and autonomy
- Physician role
- Source of knowledge social media etc.





## Al solutions are already affecting global healthcare delivery

- Al enabled population health
- Frontline health workers virtual care assistance
- Patients' virtual care assistance
- Physician clinical decision support tools



### Assuta teams with Nvidia on healthcare Al

 Assuta Medical Centers has launched an innovation center in collaboration with Nvidia. The center is intended to enable startups and medical researchers to carry out research and development of artificial intelligence-based solutions.





### Clinical collaboration is crucial for success



Product Design

#### **Co-development:**

- Product-market fit
- Clinical consulting
- Data sharing
- Assistance with fund raising



**Clinical Trial** 

#### **Preforming a trial:**

- Clinical validation
- Regulatory affairs
- Piloting



Pilot & 1<sup>st</sup> Deployment

#### **Clinical feedback:**

- 1<sup>st</sup> clinical use
- System integration
- Operational and economical validation



Growth

#### **Sales & connections:**

- Paying costumer
- Proving scaling capabilities
- Connections tech partners, investors, healthcare providers



## Establishing a development center for artificial intelligence companies

- "Today, we are working intensively with twenty companies, three of which have already received data using the Nvidia system, while four others will receive data within a few months."
- Dr. Michal Guindy, Head of Ventures and Innovation & Head of Radiology, Director of the Innovation Center



### **Assuta Al**

- A dedicated sandbox environment for Al developers and researchers
  - Secure access to deidentified data
  - Strong on premises capabilities NVIDIA DGX A-100, ...
  - Scalable cloud environments AWS
  - Multiple tools for developers, such as Clara, + BYO
- Enables collaboration with Assuta across development phases
  - Data preparation + Modeling
  - Retrospective analysis
  - Real time inferencing and validation with medical teams





## Celebrating our DGX A-100 deployment





## What influences success of Al companies?

- Data quality
- Use case
- Business model
- Ethics and privacy

- Regulations
- Ground truth
- Comparing solutions
- Clinical partner



### **Critical Success factors**

- Provider motivation: What motivates providers to invest in Al innovation? Better care, better prediction, reduction of uncertainty, increased efficiency, image and reputation
- Collaboration with clinicians
- Collaboration with industry
- Collaboration with researchers
- Focusing on the practical significant "value added"



## Thank you!

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