

过敏症诊断的突破

Artificial Intelligence in allergy diagnostics

Shanghai S&T Talents Development Center, P.R.China
& Warsaw University of Technology meeting

Warsaw, 09/09/2019

**ALLERGY
DISEASE**
the challenge

STATISTICS
future is
even worse

**CURRENT
DIAGNOSTICS**
measure by
stick and eye

InfraScan™
digital medicine



过敏症诊断的突破

Artificial Intelligence in allergy diagnostics

Shanghai S&T Talents Development Center, P.R.China
& Warsaw University of Technology meeting

Warsaw, 09/09/2019

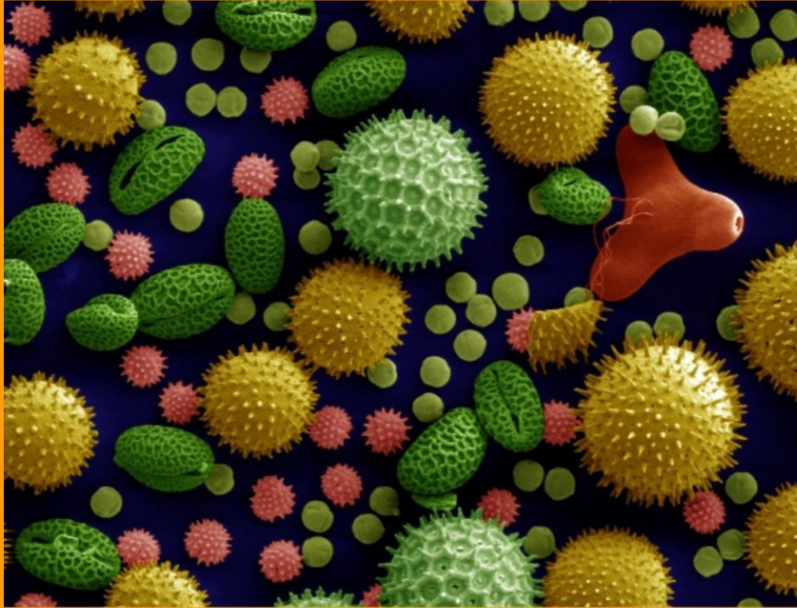
Allergy symptoms:

upper respiratory tract infections
exasperation
lack of appetite
nausea
angioedema
headache
sleep disorders
laryngeal edema
rhinitis
dry skin
urticaria
diarrhea
otitis
stomach
asthma
DERMATITIS
conjunctivitis
bloating
hyperactivity
eczema

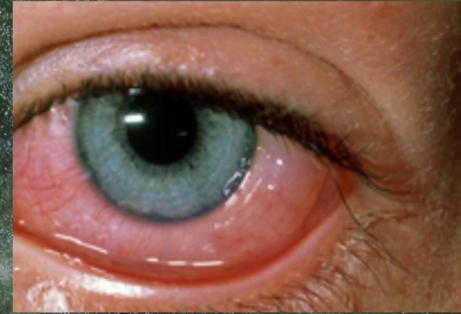
Allergens

Examples

Major allergen list



The most popular symptoms



过敏症诊断的突破

Artificial Intelligence
in allergy diagnostics

**ALLERGY
DISEASE**
the challenge

STATISTICS
future is
even worse

**CURRENT
DIAGNOSTICS**
measure by
stick and eye

InfraScan™
digital medicine



**Over 40% of
population**

49% has no diagnosis

49% of patients are not examined!



过敏症诊断的突破

Artificial Intelligence
in allergy diagnostics

**ALLERGY
DISEASE**
the challenge

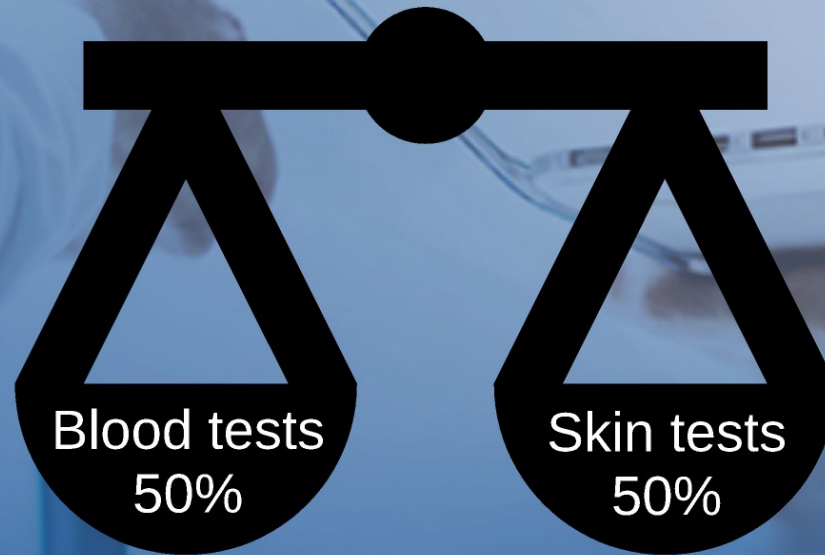
STATISTICS
future is
even worse

**CURRENT
DIAGNOSTICS**
measure by
stick and eye

InfraScan™
digital medicine



Current diagnostics methods



Blood tests

Multiple antigen labeling

However...

Presence of antibodies \neq allergy disease

Presence of antibodies \neq allergy disease



What does it mean:
"high level of shrimps antibodies"?



That is the food
I am allergic on!
I cannot eat it!

OR...

I ate shrimps
yesterday...

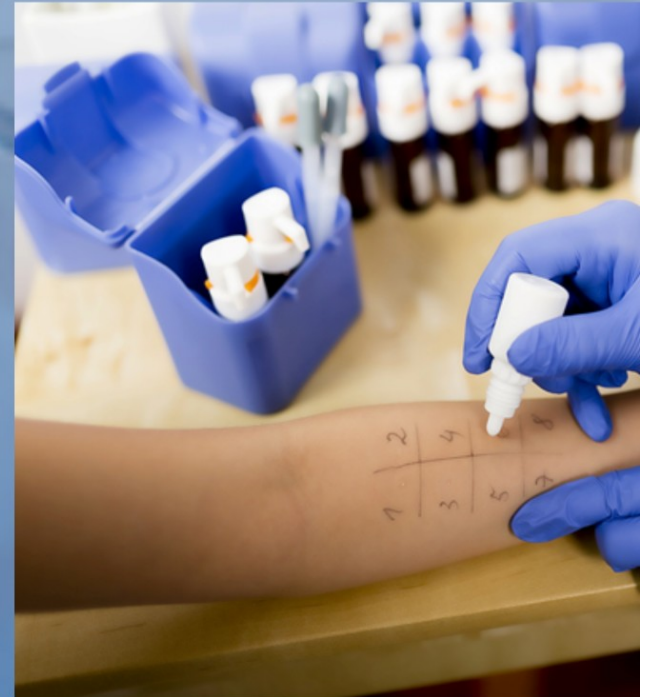
Conclusion:

Poor usefulness for medical treatment

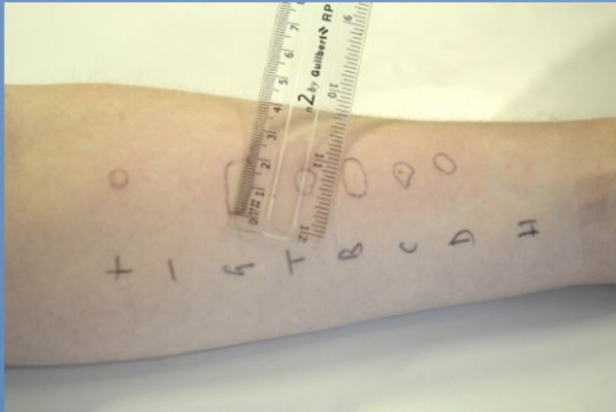
Skin tests

Golden medical
standard

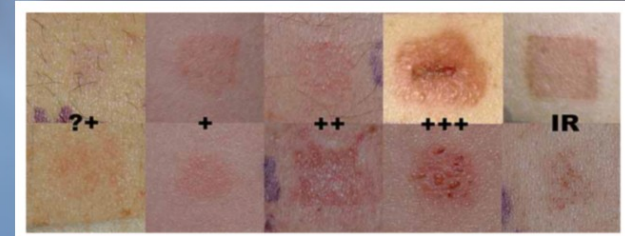
however...



Non standardised measurement methods



Prick Tests results are examined by physician with measuring stick...



Patch Tests results are examined by physician following individual experience ...

过敏症诊断的突破

Artificial Intelligence
in allergy diagnostics

**ALLERGY
DISEASE**
the challenge

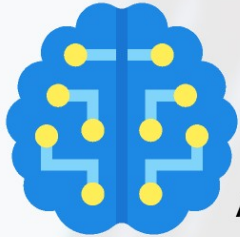
STATISTICS
future is
even worse

**CURRENT
DIAGNOSTICS**
measure by
stick and eye

InfraScan™
digital medicine



AI - digital approach



AI ANALYZING

SCANNING

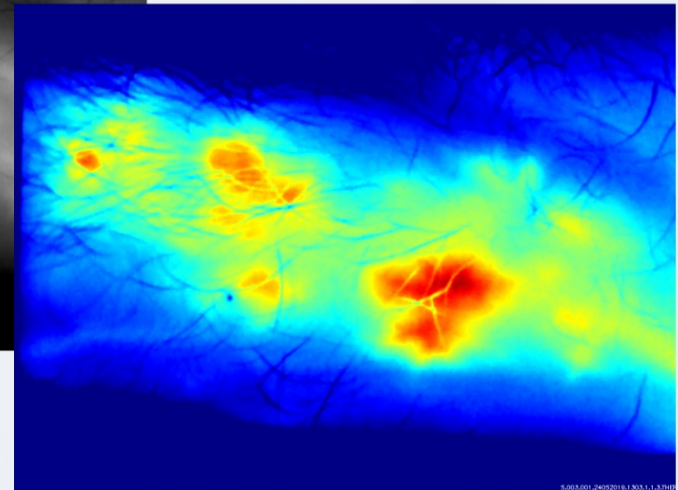
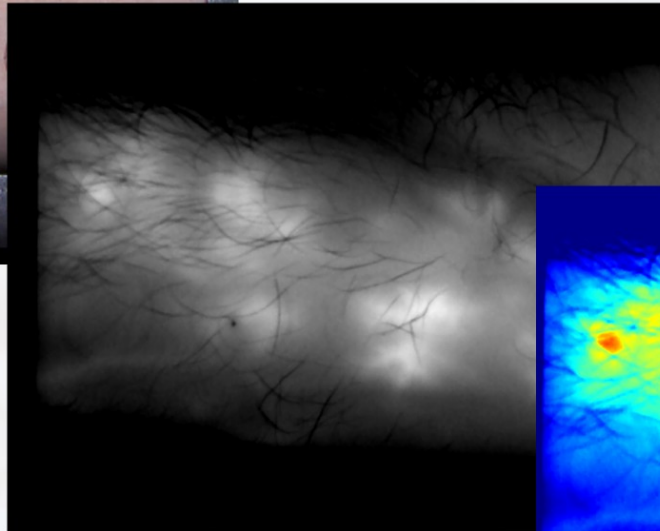
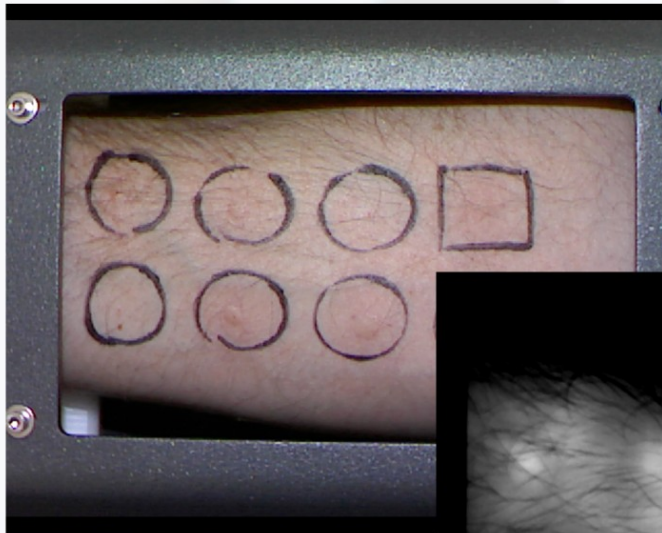


BIG DATA GATHERING

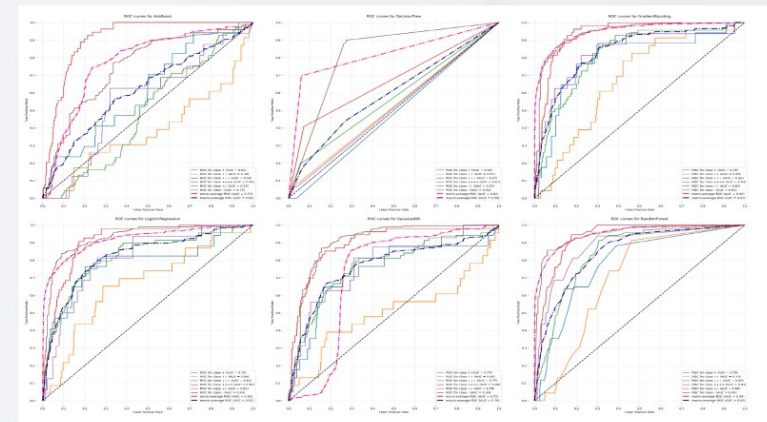
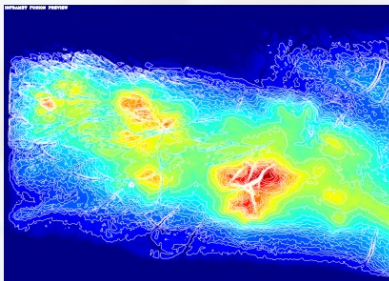
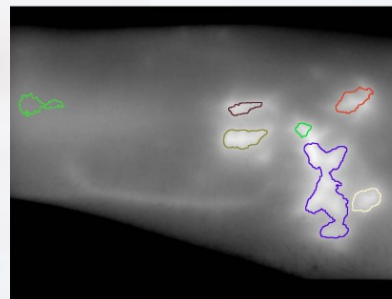
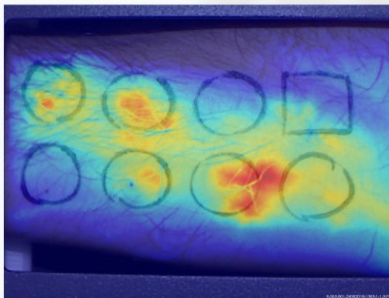
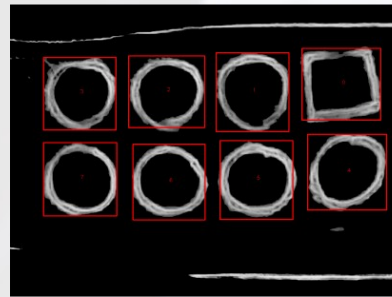
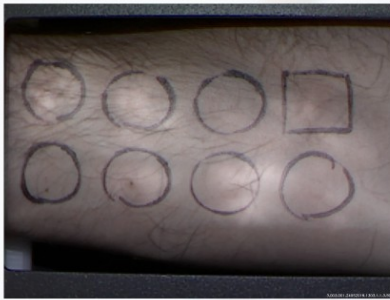


working prototype for clinical trial

Scanning



Artificial Intelligence - digital diagnosis

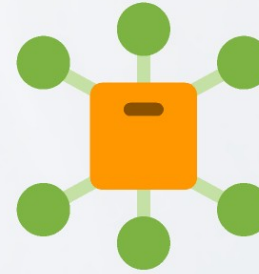




BIG DATA

Global Data Storage

Digital tests' results and diagnosis
Individual patient's data
The biggest database of allergy symptoms



Data mining & Business Intelligence

- Using gathered patient's data for medical marketing
- Profiling medical offers (treatments, medicines etc.)
- Profiled patient's records for sale



Family medicine

- automatic recognition of disease
- medical procedure open to family doctors
- enlarging accessibility of screening examinations
- digital results in standardised form – ready to use by allergist/immunologist

过敏症诊断的突破

Artificial Intelligence
in allergy diagnostics

**ALLERGY
DISEASE**
the challenge

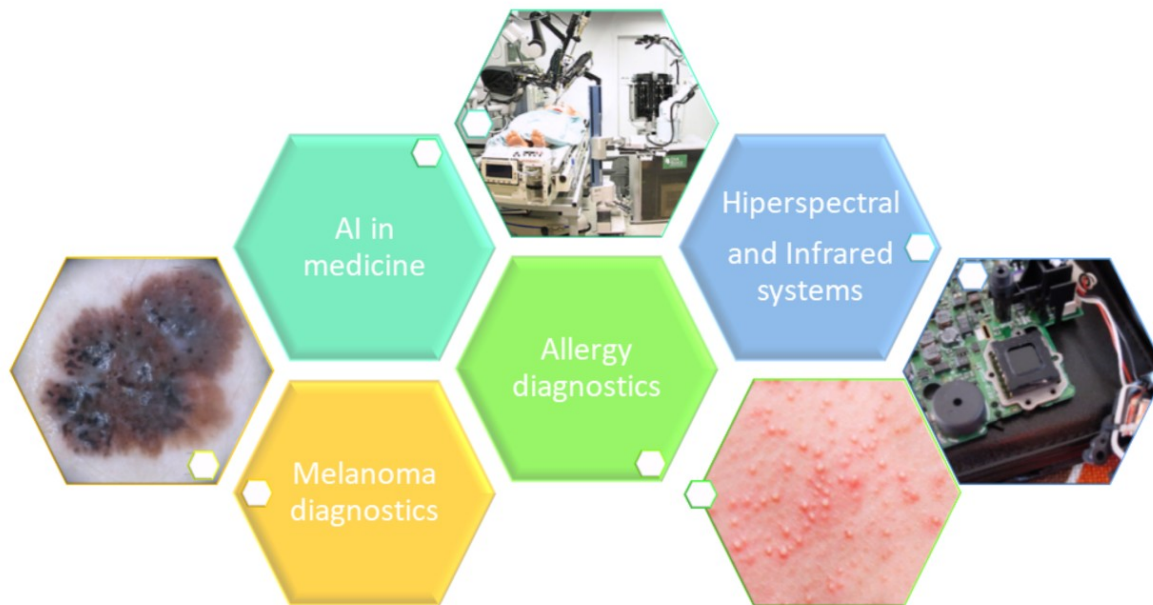
STATISTICS
future is
even worse

**CURRENT
DIAGNOSTICS**
measure by
stick and eye

InfraScan™
digital medicine



Thank you for your attention



Contact

Milton Essex SA
J.P. Woronicza 31/348
02-640 Warsaw, Poland

www.miltonessex.eu
info@miltonessex.eu



MILTON ESSEX