



The research commercialisation office of the University of Oxford, previously called **Isis Innovation**, has been renamed **Oxford University Innovation**

All documents and other materials will be updated accordingly.
In the meantime the remaining content of this Isis Innovation document is still valid.

URLs beginning www.isis-innovation.com/... are automatically redirected to our new domain, www.innovation.ox.ac.uk/...

Phone numbers and email addresses for individual members of staff are unchanged

Email : enquiries@innovation.ox.ac.uk

eHealth & Big Data



Isis Innovation & Oxford AHSN Technology Showcase



eHealth &
Big Data

Improving Stroke Treatment with Medical Imaging

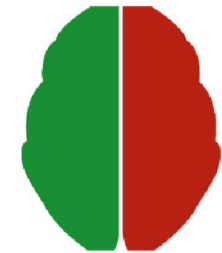
Dr Michalis Papadakis
CEO & Co-Founder



Brainomix



- ✓ Oxford University start up
- ✓ Vision: leaders in medical imaging biomarkers
 - Neurological and cerebrovascular diseases
 - First product: e-ASPECTS - stroke
- ✓ CEO: 8 years stroke research
- ✓ Co-founder: Dean of Medicine and Professor of Stroke Medicine



Brainomix



- > Brainomix has developed the innovative imaging software e-ASPECTS designed to improve stroke treatment
 - It provides automated and standardised analysis of CT brain scans of stroke patients
- > It applies the clinically validated Alberta Stroke Program Early CT Score (ASPECTS)
- > e-ASPECTS is a tool that assists diagnosis and patient selection for stroke treatment



Stroke Treatment

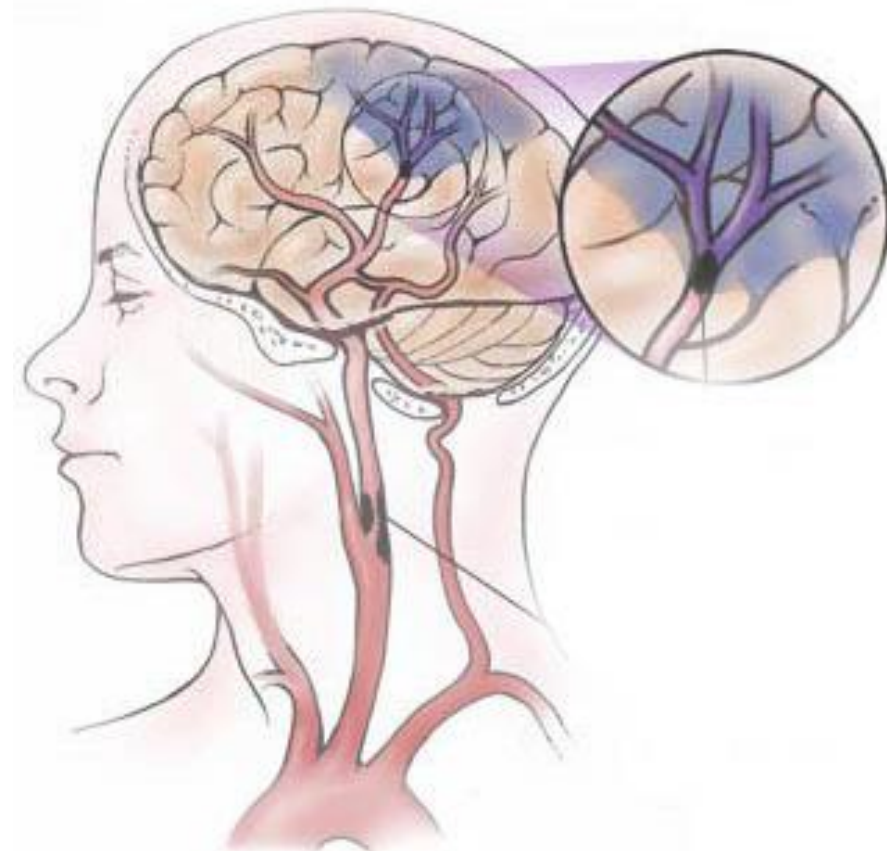


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- #1 cause of disability, #3 cause of death
- Worldwide: 13 million ischaemic strokes per year
- Available treatments
 - short time window
 - risk of side effects (bleeding)
- CT scan is required stroke diagnosis tool
- **The problem**

More than 25% of patients who should get treatment **do not**
- **The cause**

Worldwide lack of readily available expertise to interpret CT scans



Stroke Treatment



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Signs of Stroke Damage on CT Scan



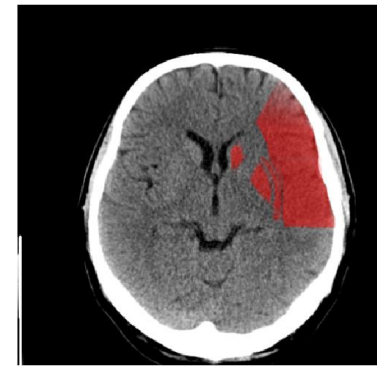
On admission



24 hours later

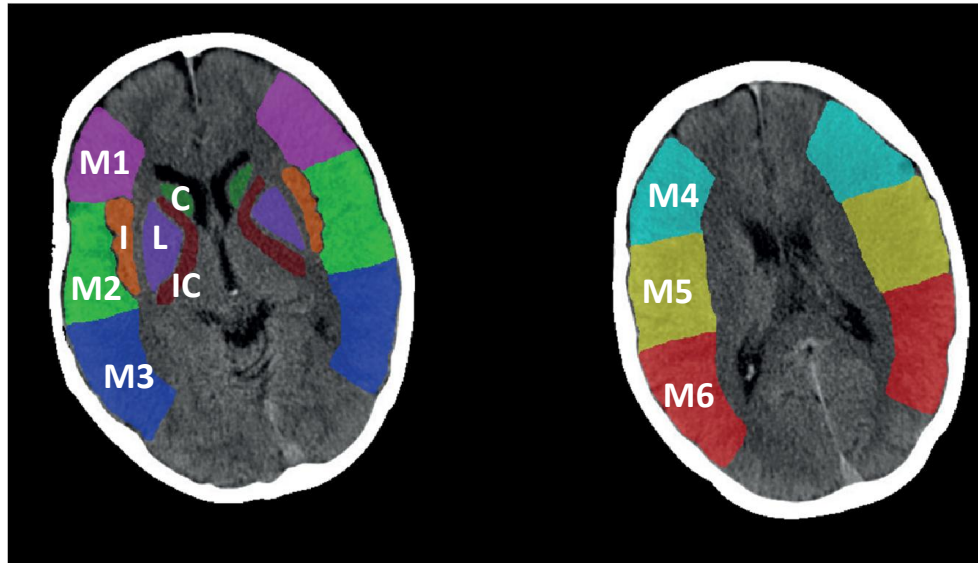


e-ASPECTS



- Patient selection requires accurate CT scan diagnosis
- Accurate CT scan diagnosis relies on extensive experience

ASPECTS Score



Developed by Brainomix co-founder
Professor Alastair Buchan in 2000

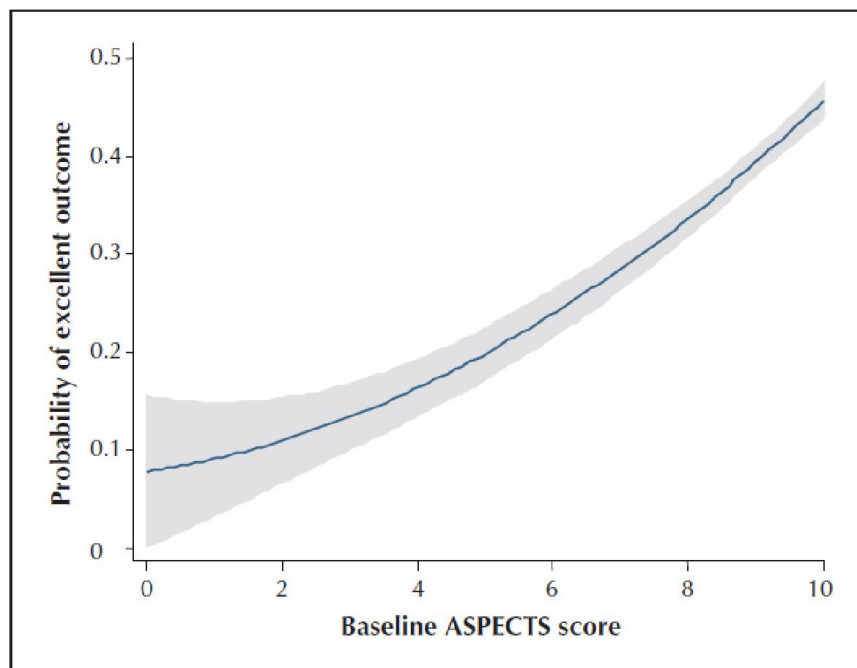
ASPECTS is clinically validated
250 papers support it's application

Lancet (2000) 355: 1670-1674
AJNR Am. J. Neuroradiol. (2001) 22: 1534-1542
CMAJ (2005) 172:1307-1312
Stroke (2003) 34: 1925-1931
Cerebrovasc. Dis. (2011) 21: 898-902

Patient Selection for Thrombolysis



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ASPECTS score is a strong predictor of patient outcome following thrombolytic treatment

Patient Selection for Endovascular Treatment



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Doctors call for wider use of new stroke treatment

By Eleanor Bradford
BBC Scotland Health Correspondent

19 June 2015 | Scotland

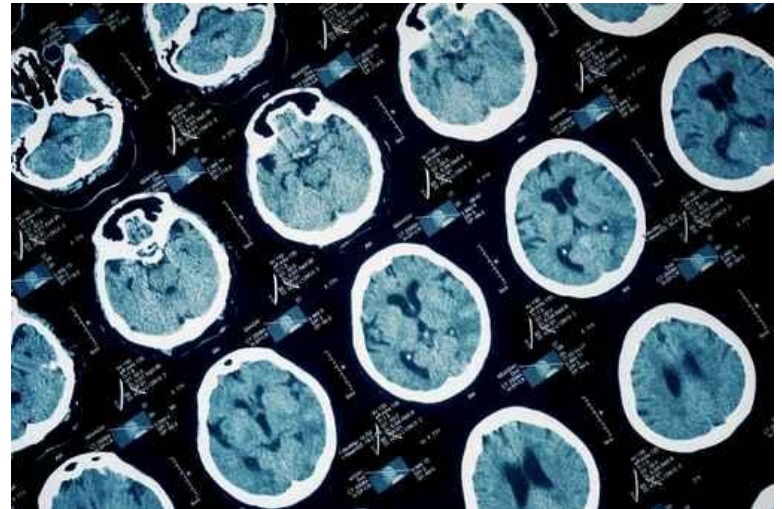


In 2015, positive endovascular trials used ASPECTS to select eligible patients



PROBLEM

- Not used in routine clinical practice
 - Requires extensive expertise
 - Variability between experts





SOLUTION

e-ASPECTS software

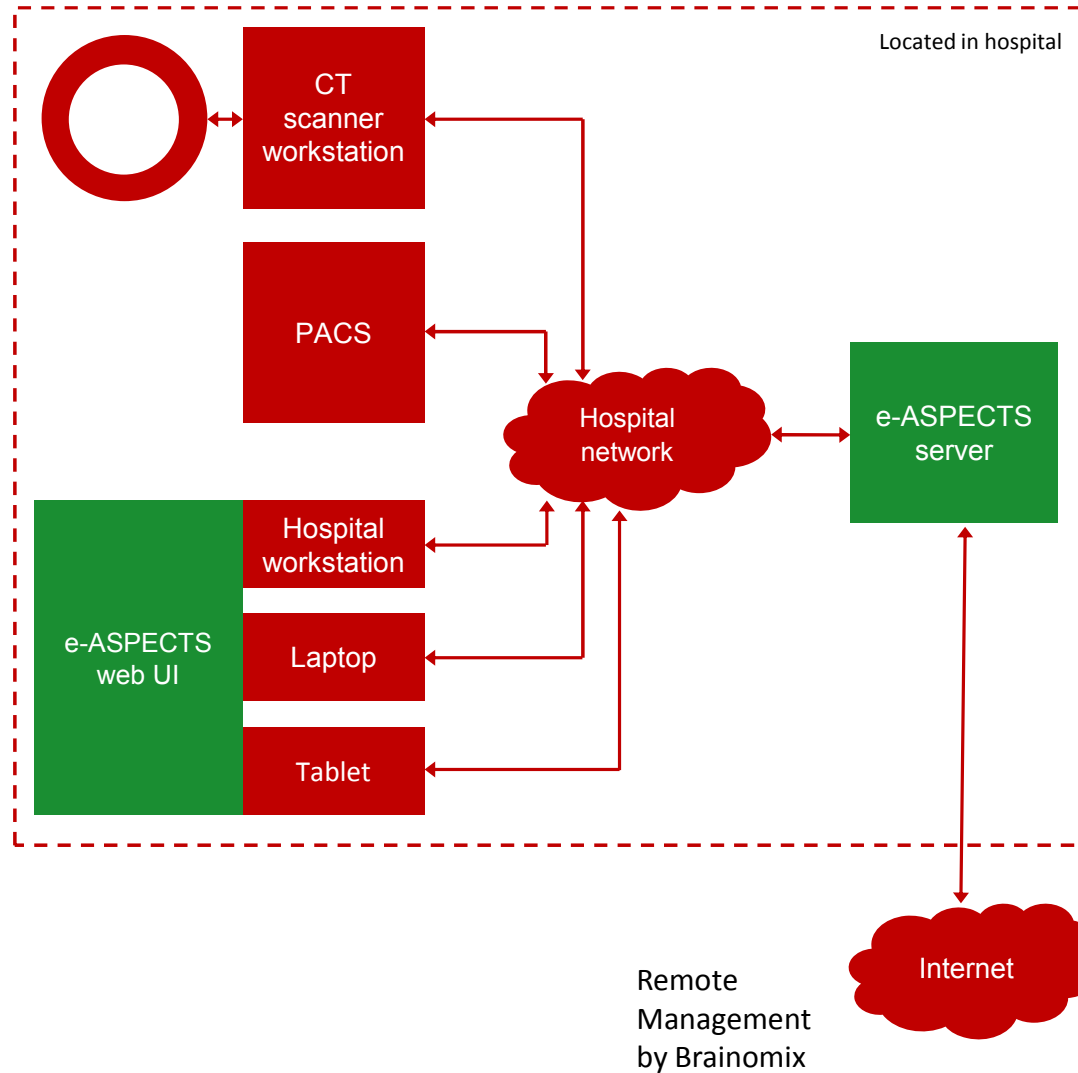
- ✓ Automates validated methodology
- ✓ Assessment of stroke damage on CT scans
- ✓ Cloud based deployment
- ✓ CE marked for clinical use
- ✓ Equivalent performance to experts



e-ASPECTS in the Clinical Pathway



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Benefits to the Physicians



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e-ASPECTS is expected to:

- Automate and standardize analysis of CT scans
- Enhance physicians confidence
- Speed up decision making process



Benefits to the Patients



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e-ASPECTS is expected to:

- Improve patient selection
- Increase the uptake of stroke treatment
- Will reduce the impact of stroke and therefore improve the proportion of independent patients



Hospital Economics



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e-ASPECTS aims to reduce cost,
as it is expected to:

- > Speed up decision making by 15 min
- > Increase patients receiving stroke treatment by 20%
- > Reduce consultant time
- > Improve patient outcome
- > Reduce length of stay

cost reduction: £150 per patient



Commercialization Strategy



- Awareness
 - ✓ KOLs
 - ✓ Stroke Associations
 - ✓ Stroke units
- European product launch
 - ✓ April 2015
 - ✓ Installations in UK, Germany and Finland
- Sales
 - ✓ Business case to hospital managers
- Growth
 - ✓ Understand country-specific healthcare



The Brainomix Team



eHealth &
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Dr Michalis Papadakis
CEO

*Former Scientific Director of
Oxford University Stroke Lab*



Prof Alastair Buchan
Senior Medical Science Adviser

*Dean of Medicine at Oxford University
and world leading clinician in stroke
treatment*



Prof Iris Grunwald
Medical Director

*Consultant Neuroradiologist
International reputation in
stroke interventions*



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Chairman

*Former VC at Intel Ventures Europe
Experienced NED and investor in
early stage companies*



Eric Greveson
CTO

*Expert in Medical Imaging
and Computer Vision*



Archana Schoeneman
VP Sales

*Global medical device
executive*



Constantin Thiopoulos
Business Development Manager

*15 years hands-on experience
on ICT start-ups*

Roadmap - Milestones



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