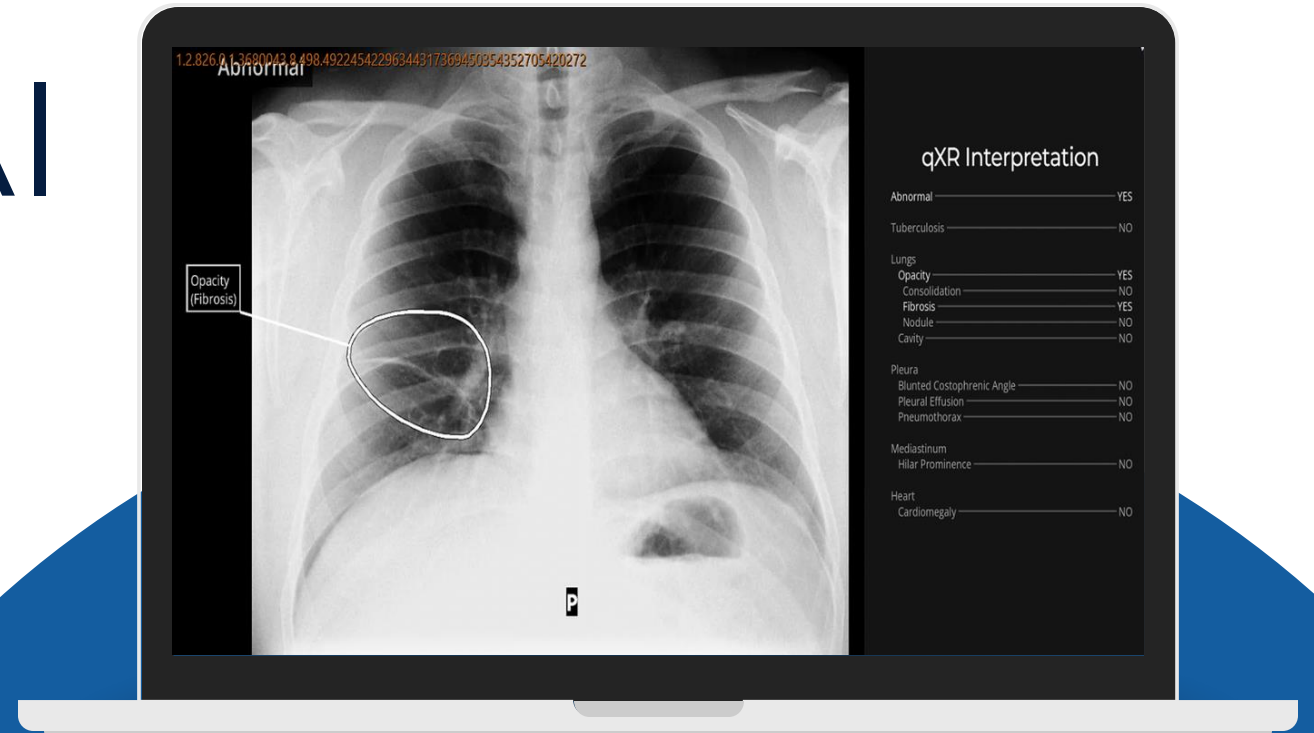



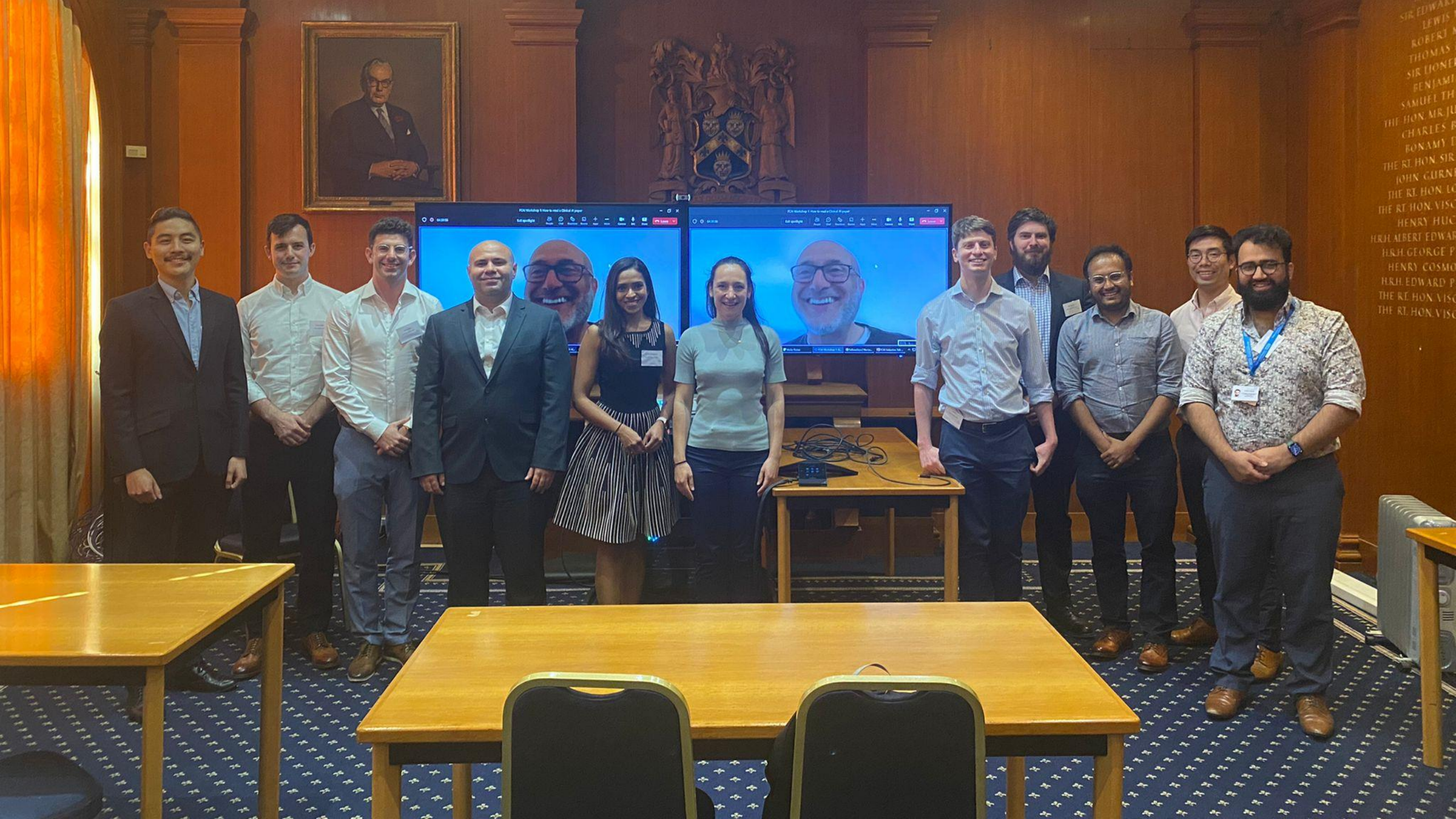
Deploying AI in the NHS

Dr Sarah Blake, Cardiology Registrar



Fellowship in Clinical Artificial Intelligence

Applications for future rounds of the NHS Fellowship in Clinical AI can be found [here](#) .



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5 step guide to adopting AI tools in healthcare

Step 1 Identify the problem

Step 2 Finding a solution
Assessing technological tools including AI

Step 3 Planning for implementation of the AI solution
Identify your team and establish the aims of the project

Step 4 IT integration

Step 5 Deployment and post-market surveillance

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qXR

World's most widely used AI for comprehensive chest X-ray reporting, providing pre-read assistance in <1 minute with detailed lung findings.

XRAY FINDINGS

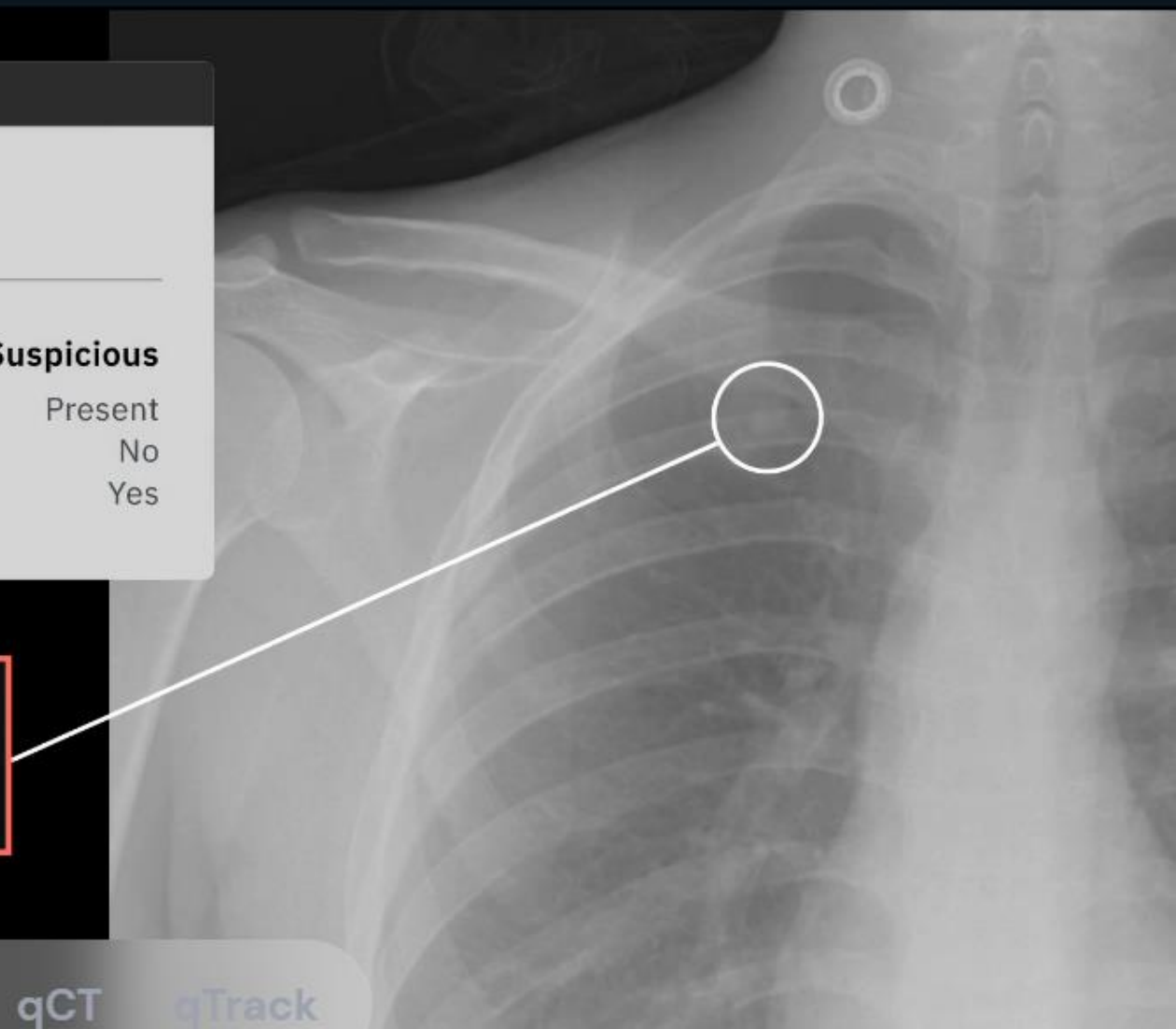
Remarkable Study

LUNGS

• Nodule	Suspicious
Calcification	Present
Homogeneous	No
Solitary nodule	Yes

Opacity(Nodule)

Calcified
Solitary
3x3mm





Article

Using Artificial Intelligence to Stratify Normal versus Abnormal Chest X-rays: External Validation of a Deep Learning Algorithm at East Kent Hospitals University NHS Foundation Trust

Sarah R. Blake ¹, Neelanjan Das ^{1,*}, Manoj Tadepalli ², Bhargava Reddy ², Anshul Singh ², Rohitashva Agrawal ², Subhankar Chatteraj ^{2,*}, Dhruv Shah ² and Preetham Putha ²

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Abstract: *Background:* The chest radiograph (CXR) is the most frequently performed radiological examination worldwide. The increasing volume of CXRs performed in hospitals causes reporting backlogs and increased waiting times for patients, potentially compromising timely clinical intervention and patient safety. Implementing computer-aided detection (CAD) artificial intelligence (AI) algorithms capable of accurate and rapid CXR reporting could help address such limitations. A novel

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Aims of the project

- ▶ Improve immediacy of chest xray reporting
- ▶ Create worklists of normal and abnormal scans for radiology workflow
- ▶ Audit films tagged as “normal”
- ▶ Consider not reporting “normal” scans

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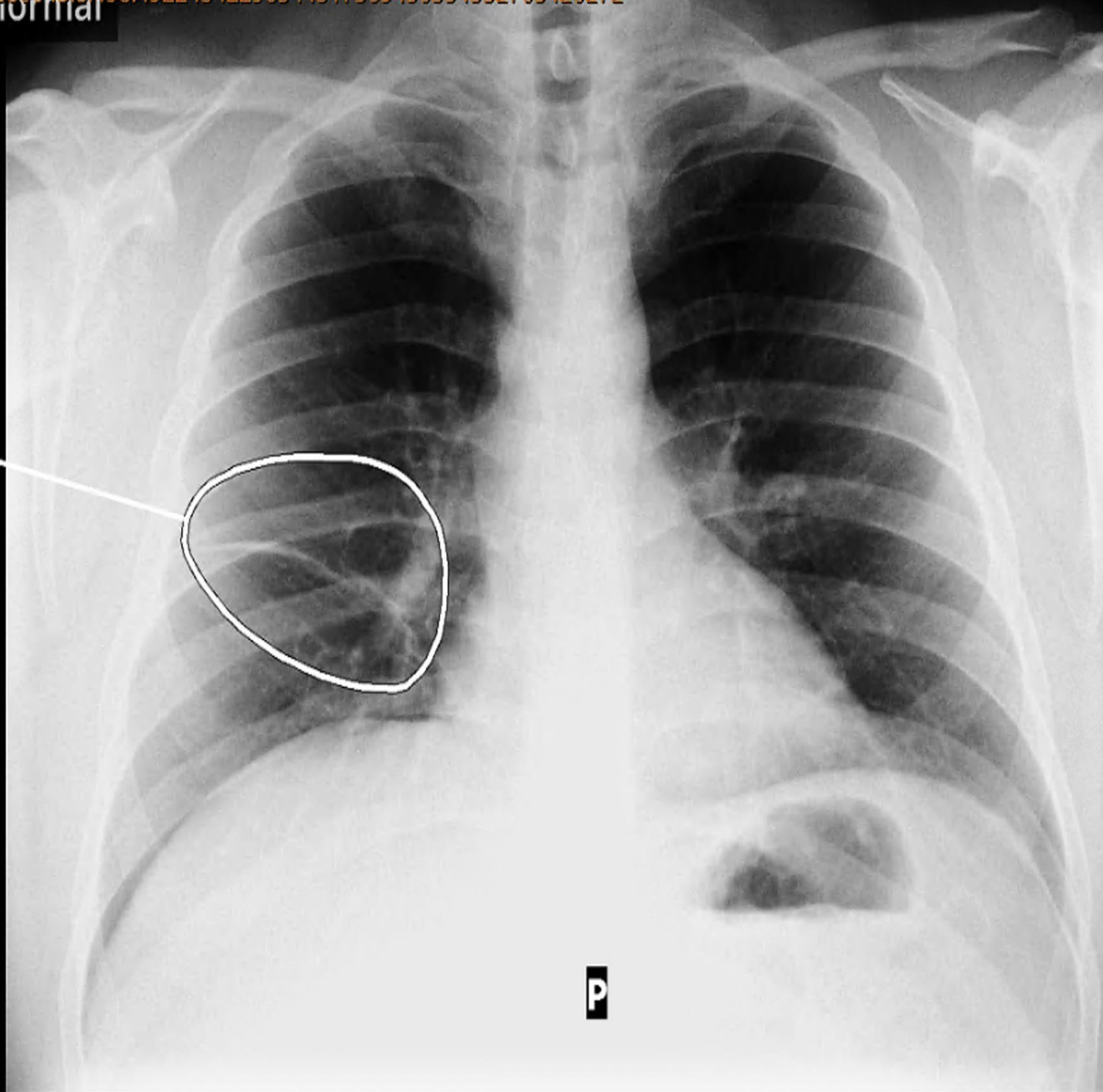
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Abnormal

Opacity
(Fibrosis)



qXR Interpretation

Abnormal _____ YES

Tuberculosis _____ NO

Lungs

Opacity _____ YES

Consolidation _____ NO

Fibrosis _____ YES

Nodule _____ NO

Cavity _____ NO

Pleura

Blunted Costophrenic Angle _____ NO

Pleural Effusion _____ NO

Pneumothorax _____ NO

Mediastinum

Hilar Prominence _____ NO

Heart

Cardiomegaly _____ NO

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Deploying artificial intelligence software in an NHS trust: a how-to guide for clinicians

Sarah R. Blake , MBChB, MRCP, PhD^{1,*} and **Neelanjan Das**, MBBS, FRCR²

¹Cardiology Department, Guy's and St Thomas' NHS Foundation Trust, London SE17EH, United Kingdom

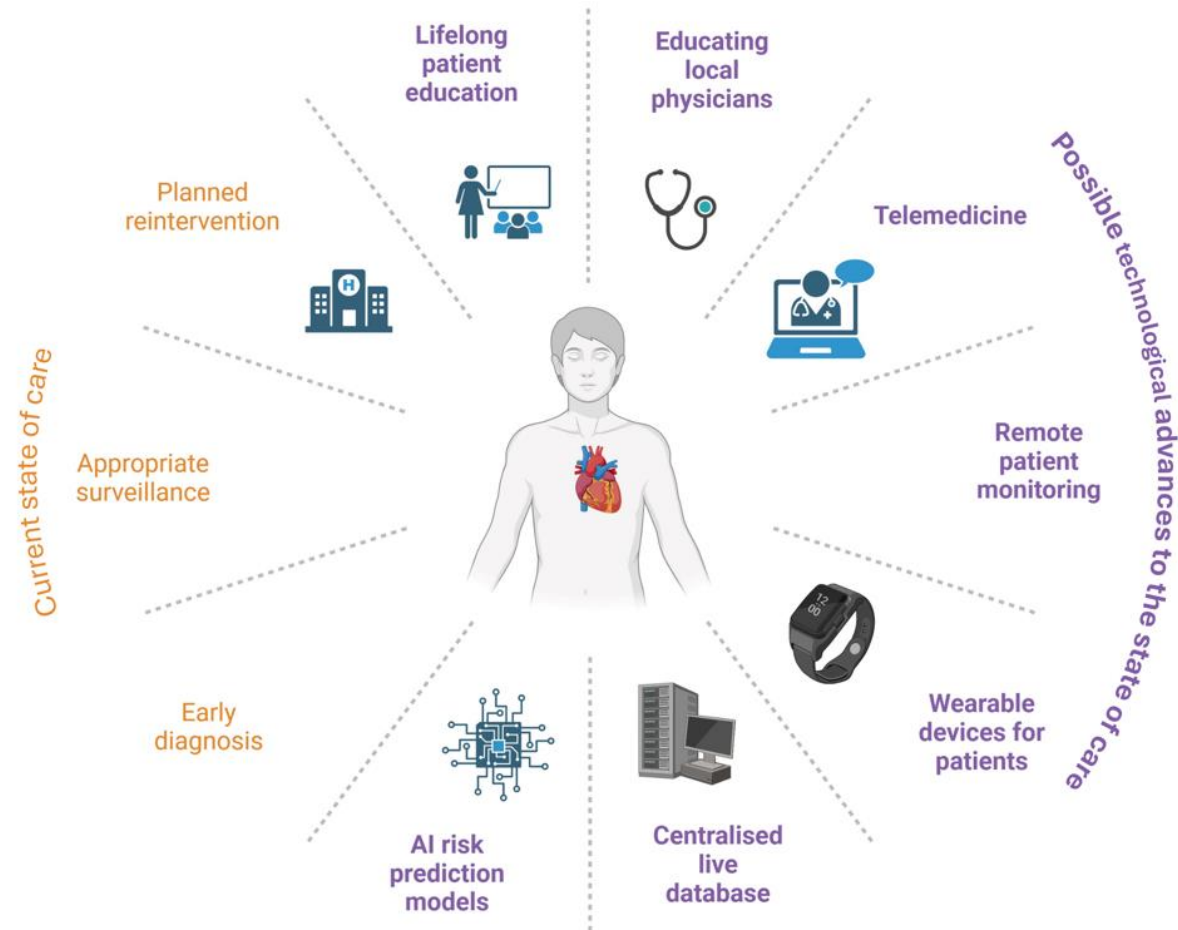
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Technology for Better Congenital Heart Disease Care: The Time is Now

S R Blake¹
Gerhard-Paul Diller^{1,2}
M A Gatzoulis¹





European Society
of Cardiology

European Heart Journal (2019) 40, 1069–1077
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CLINICAL RESEARCH

Congenital heart disease

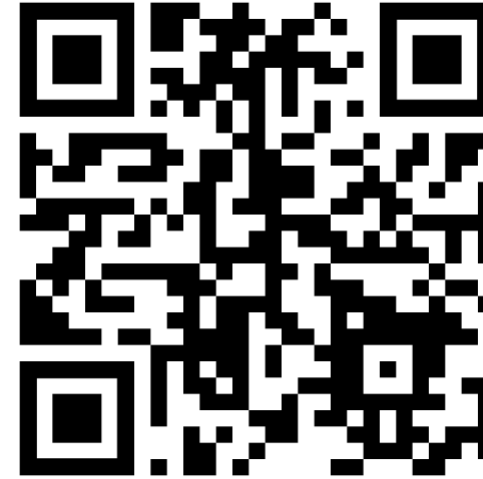
Machine learning algorithms estimating prognosis and guiding therapy in adult congenital heart disease: data from a single tertiary centre including 10 019 patients

**Gerhard-Paul Diller^{1,2,3,4*}, Aleksander Kempny^{1,2}, Sonya V. Babu-Narayan^{1,2},
Marthe Henrichs³, Margarita Brida^{1,5}, Anselm Uebing^{1,6}, Astrid E. Lammers⁶,
Helmut Baumgartner^{3,4}, Wei Li^{1,2}, Stephen J. Wort^{1,2}, Konstantinos Dimopoulos^{1,2},
and Michael A. Gatzoulis^{1,2}**

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Deploying AI in the NHS: A how-to
guide for clinicians



AI Fellowship webpage

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