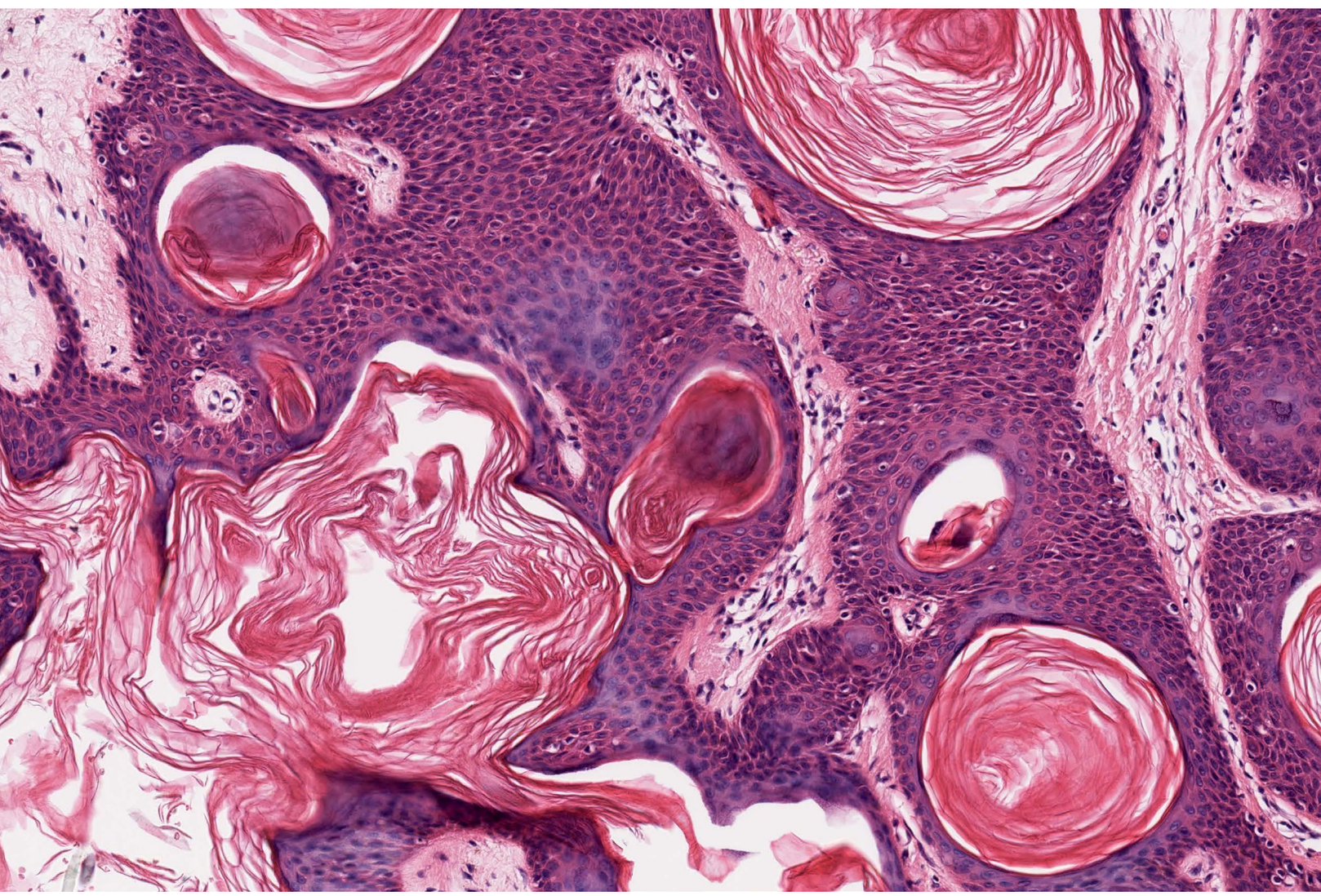
The Royal College of Pathologists

Pathology: the science behind the cure

Digital pathology strategy 2019



Introduction

Digital pathology is a rapidly growing area that has the potential to transform how pathology is practised. There is currently a great deal of interest in digital pathology, as it sits at the confluence of several emerging themes in healthcare: an increased focus on technology, the use of networks to deliver pathology services, the growing power of digital imaging technologies and the emergence of artificial intelligence (AI) in medical imaging.

The College should not only engage in this area, but lead on its development and use.

This document provides an outline strategy for the College to lead in the implementation and development of digital pathology. It is aligned to the four strategic objectives published in *The College's Strategy 2018–21*.

The latest edition of this digital pathology strategy updates and replaces the previous strategy, Diagnostic digital pathology strategy, published In August 2017.

In 2017, the College produced an overview of the technology, a review of the evidence and guidelines for the use of digital pathology in primary diagnosis in its *Best practice recommendations for implementing digital pathology*. These are available at: www.rcpath.org/profession/digital-pathology.html

Dr Darren Treanor

on behalf of the College's Professional Standards team

Leadership and governance

This work will be led by the Clinical Lead for Diagnostic Digital Pathology (Dr Darren Treanor). Governance will be via College Council.

Support from the Digital Pathology Committee, the Pathology Informatics Group and other College specialty advisory committees will be essential.

General objectives

The College supports the use of digital pathology in diagnosis, research, education and training.

The College will:

- establish a committee to implement the strategy, which will include College officers and Fellows
- engage with partners (for example, the Institute for Boimedical Science [IBMS], the NHS, research funding bodies and industry) and provide professional leadership in this area
- support Fellows wishing to use digital pathology in clinical practice and coordinate training in relation to digital pathology
- ensure that high standards of practice are maintained by departments implementing digital pathology
- support the deployment of digital pathology across laboratories
- support and promote research into the use of digital pathology.

Education, training and research

The College will:

- provide support to integrate digital pathology in curricula for professional groups at all stages of training. In particular, identify the basic skills needed for all histopathology trainees in early training, and opportunities for more advanced work in later training
- produce specific advice on the delivery of professional examinations with digital pathology (for example, FRCPath part 1 and 2 in histopathology)
- provide training and updates in digital pathology, such as courses, educational material and guides
- identify where digital pathology can support education and training, such as in e-learning, and lead or assist with digital pathology initiatives
- identify areas in which digital pathology can support undergraduate education nationally
- support and stimulate research in the use and development of digital pathology
- stimulate the identification of pathology imaging and pathology informatics as specific areas of interest in pathology training and research (for example, MSc programmes in digital pathology).

Excellence and knowledge in pathology practice

The College will:

- support the safe adoption of digital pathology while maintaining professional standards and considering ethical issues
- regularly update its *Best Practice Recommendations for Digital Pathology* and website as evidence accumulates
- develop additional general guidelines for new areas, such as:
  - quality assurance of digital pathology, in collaboration with relevant bodies (for example, the IBMS and the British Standards Institute and others (for example, the Cytogenomic External Quality Assessment Service) that run external quality assurance schemes)
  - the use of image analysis and AI in digital pathology, at an appropriate time. This will include the assessment, management and mitigation of risks associated with image analysis
- develop guidelines in specific areas as the evidence base increases (for example, display technology, compression)
- collect and share information about the use of digital pathology in clinical practice
- develop mechanisms to promote audit in the use of digital pathology, including the possibility of a national register of digital pathology
- develop public engagement activities and consider the patient perspective in all activities.

Increase the College's influence through a clear, coherent, professional voice

The College will:

- form a cross-body group to engage with relevant bodies to work in partnership on digital pathology. This group will include, for example, the IBMS, industry (such as the British In Vitro Diagnostic Association), NHS bodies, the Royal College of Physicians Faculty of Clinical Informatics and the Royal College of Radiologists
- work with government and the NHS to ensure that the adoption of digital pathology is evidence based and maintains professional standards
- engage with government and research funding bodies to shape the direction of research in this area
- promote the use of digital pathology to engage undergraduates and trainees, inspiring them to choose pathology as a career
- use digital pathology to support communication and engagement with the public and patients.

Resource the future of the College

The College will:

- use digital pathology to promote the use of the facilities and opportunities in its new building at Alie Street
- deliver hands-on digital pathology demonstrations, teaching and workshops
- find ways to deliver digital pathology educational material internationally
- seek opportunities to work with digital pathology industry partners, where appropriate
- keep College staff up to date on the place of digital pathology in its work.

The Royal College of Pathologists is a professional membership organisation with more than 11,000 fellows, affiliates and trainees worldwide. We are committed to setting and maintaining professional standards and promoting excellence in the teaching and practice of pathology, for the benefit of patients.

Our members include medically and veterinary qualified pathologists and clinical scientists in 17 different specialties, including cellular pathology, haematology, clinical biochemistry, medical microbiology and veterinary pathology.

The College works with pathologists at every stage of their career. We set curricula, organise training and run exams, publish clinical guidelines and best practice recommendations and provide continuing professional development. We engage a wide range of stakeholders to improve awareness and understanding of pathology and the vital role it plays in everybody's healthcare. Working with members, we run programmes to inspire the next generation to study science and join the profession.

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