Clinical Laboratory based Diagnostics and Medicine

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14th March 2018
Newcastle

Healthcare at its very best - with a personal touch
• Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH) is recognised nationally as a **centre for healthcare excellence** and provides a broader range of specialist services than any other group of Hospitals outside of London.

• The Trust is the nation’s **top performing Trust with regard to clinical trials and a pioneer of Research and Development**, supporting initiatives such as the Molecular Pathology Node and the National Institute for Healthcare Research (NHIR) funded, Medtech and In-vitro Diagnostic Co-operative (MIC).

• ‘**Integrated Laboratory Medicine**’ including disciplines of Cellular Pathology, Blood Sciences, Immunology, Microbiology (including PHE) and Genetics.

• This complex interaction and network of **specialist services**, together with clinical and academic integration, is unparalleled anywhere in the region and differentiates the service provided by NUTH, from all other Trusts within the North East.
Cellular Pathology Overview

The department of Cellular Pathology NUTH is comprised of the following primary disciplines:

- Histology
- Neuropathology
- Cytology
- Mortuary and Forensic services
- Node Research Proximity Laboratory

Supported by office administration and IT.

The department is ISO15189:2012 Accredited, HTA licensed and one of the largest laboratories in the UK. We offer national and regional referrals for all specialist teams.
• The department processes approximately 58K histology samples, 45K gynae cytology samples, 5K non-gynae cytology and up to 2000 forensic and post mortem cases.

• We have a dedicated team of 35 Consultants with specialist expertise, we are a training school for specialist training (ST) medics. We work closely with the university and have academic pathologists covering all areas of Cellular Pathology.

• We have 120 skilled non-medical staff including Managers, Advanced Practioners, Biomedical Scientists, Health Care Scientist Associates, IT and Clerical staff.

• We have a purpose built laboratory which is well-equipped.
Training

• We have a robust induction, training and competency process in accordance with accreditation and our professional bodies.

• We have skill mixed to allow enhanced roles and career development of staff across all levels.

• Staff engagement, communication and well-being is core to our service delivery as a team.
Routine Services available...

- Specimen Dissection
- Specimen Processing
- Embedding
- Microtomy and Cryotomy
- Staining
- Muscle and Nerve service
- Immunofluorescence
- Immunohistochemistry - single and dual staining
- Electron Microscopy
- Neuropathology
- Sterile-technique for downstream genomic and molecular testing
- In-situ Hybridisation
- Frozen tissue handling
- 100K Genomes techniques
- Cytological preparations
The Newcastle MRC/EPSRC Molecular Pathology Node
Services from the Node

Roche Discovery Ultra: Bespoke automated tissue assays including RNA scope

Perkin Elmer Vectra Automated Quantitative Pathology Imaging System

Tissue Microarray Construction - TMA Grand Master, 3DHISTECH.

ZEISS laser capture microdissection microscope
The Newcastle upon Tyne Hospitals
NHS Foundation Trust

Achievements

Proximity

Path

People

Proximity

Research Laboratory

Established in clinical pathology department

Multi-dimensional imaging and analysis

Increased collaboration

Industry, related platforms (DEC; MIC) and UK Pathology Nodes

43 projects completed

22 projects in progress

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So what do these benefits mean???
Optimal Tissue Diagnostics

- Established well-trained staff
- Modern well-equipped laboratory
- Advisory service, panel reviewed projects and technical requests
- Standardised practices within a reputable, accredited quality diagnostic service
- Optimal tissue usage, resource pool
- Patient focused
Pathology Wide Services

- Integrated Directorate
- Academic Pathology Linked
- Collaboratively focused
- Dedicated Business Unit
- Pathology IT support – data provision and statistical support
- Sustainability and Transformation Plan ‘Hub’ Laboratory

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Innovative Diagnostics

Engaged with national change

Established patient pathways developing with bringing novel techniques to benefit treatment stratification