

Interventional Neuroradiology Fellowship position Beaumont Hospital, Dublin, Ireland

Interventional Neuroradiology training post to commence July 2022 with option of 1- or 2-year position.

Beaumont Hospital is an 820 bed hospital located in north Dublin city. It has a catchment area of approximately 250,000 people, and is the lead hospital in the Dublin North East HSE network, which extends the catchment area to over one million people. It employs 3,200 staff. Beaumont Hospital is a regional centre for oncology, radiation oncology, ENT and a designated centre of excellence for cancer specialties. It is the national referral centre in Ireland for neurology, neurosurgery, and cochlear implantation. The hospital has an academic link to, and is paired with, the Royal College of Surgeons in Ireland (RCSI) for teaching, training and research.

The neuroradiology department consists of 7 neuroradiology consultants: 5 interventional and diagnostic neuroradiologists and 2 diagnostic neuroradiologists. The interventional neuroradiologists provide a 24/7 interventional neuroradiology on call service for the majority of Ireland barring the Cork region.

There is long and close relationship between the neuroradiology and neurosurgery departments in Beaumont and approximately 90% of aneurysms presenting to Beaumont are now treated using endovascular techniques. Last year 220 intracranial aneurysms were treated using a variety of endovascular methods including balloon assisted coiling, stent assisted coiling, flow diversion and intra-saccular flow disruption. These endovascular treatments are performed via both trans-femoral and trans-radial approaches.

Beaumont participated in the ESCAPE trial, one of the landmark RCTs published in 2015 which proved the benefit of mechanical thrombectomy in the setting of large vessel occlusion stroke. Whilst mechanical thrombectomy has been performed in the department since 2010, case numbers have risen precipitously since the trials' publication with 262 thrombectomies performed in 2018, 307 performed in 2021 and 335 performed in 2021 despite the Covid 19 crisis. The number of thrombectomies performed at Beaumont is expected to increase further over the coming years as more LVO strokes are referred to the service from across Ireland.

As well as endovascular treatment of intracranial aneurysms and mechanical thrombectomy for stroke, the department performs a wide range of other vascular neurointerventional procedures. These include embolization of cerebrovascular and spinal vascular malformations such as dural AVFs and AVMs (approximately 30 per year), carotid artery stenting (approximately 60 per year), middle meningeal artery embolization for the treatment of chronic subdural haematomas and head and neck embolizations in the setting of tumors/epistaxis. In addition to these interventions approximately 600 diagnostic cerebral angiograms are performed in the department annually.

Paediatric cerebral angiograms are also performed in the department whilst paediatric neurointerventions are currently performed in Crumlin Children's Hospital by the Beaumont neuroradiologists. Some consultants in the department also subspecialize in the treatment of peripheral AV malformations and peripheral slow flow venous/lymphatic malformations.

In addition to vascular neurointervention, a wide range of percutaneous spinal interventions are performed in the department including vertebroplasties, nerve root injections, lumbar punctures and vertebral biopsies under CT and fluoroscopic guidance.

As an interventional neuroradiology fellow, extensive experience will be gained across the entire range of cerebral and spinal vascular interventions and percutaneous spinal interventions described above under close consultant supervision.

The department also has a busy diagnostic neuroradiology service, with in excess of 500 neuroradiological CT studies and 800 neuroradiological MRI studies performed on a monthly basis. Dedicated time slots will also be assigned to allow trainee to report on diagnostic neuroradiology studies. This together with MDT attendance and participation will provide experience in diagnostic neuroradiology imaging as well as intervention. For a neurointerventional post it is expected that 20% of trainee timetable would be reserved for diagnostic neuroradiology.

The department participates in several weekly, consultant led multidisciplinary team conferences. These include neurovascular, stroke, neurology, brain and spine tumor board, ENT, ENT oncology, pituitary, stereotactic radiotherapy and clinical neuroscience. This is in addition to weekly INR-specific teaching and case review and monthly thrombectomy case review.

The department is a collaborator in several prospective and randomized controlled trials related to neuroradiology and publishes multiple original research papers, review papers, and case reports annually. Research is an integral component of the post and a dedicated half day a week will be timetabled for research purposes. Under supervision and guidance from the neuroradiology consultants, the fellow will be encouraged and expected to participate in and lead on research related to neuroradiology with the aim of local and international presentations as well as journal publications. There will be allocated teaching time set aside to allow self-directed learning as well as didactic and case based consultant led teaching, with a view to trainees developing the necessary knowledge base required of a diagnostic and interventional neuroradiologist.

There have been a number of major capital investments in equipment in the radiology department in recent years, most notable the acquisition and installation of two brand new state of the art Siemens biplane neuroangiography suites in 2020. Access to these two neuroangiography suites has become essential given the increasing burden of hyperacute thrombectomy cases.

A new 1.5T MR scanner was also installed in 2020 and the department has access to a further 1.5T scanner and a 3T scanner. Two 128 slice CT scanners are also recent installations in the department. There is also a single plane interventional radiology suite, digital radiography rooms, a fluoroscopy room, ultrasound, a dedicated ultrasound intervention suite and 2 x SPECT-CT. Overall the Radiology Department as a whole performs well over 180,000 radiological tests and procedures annually.

Interested candidates are encouraged to contact Dr. Matt Crockett in advance of application.

Dr Matt Crockett

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