

***Quels horizons pour les jeunes  
Neuroradiologues ?  
Cursus, formations théoriques et  
pratiques, perspectives de recherche***

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# NRI

## Cursus/Perpectives activité clinique

### - En France :



- \* *DES “radiodiagnostic et imagerie médicale”*
- \* *Validation du DIU de neuroradiologie (/2 ans)*
- \* *3 années consécutives dans un service de NRI justifiant > 80 actes IC par an*



- En Europe :



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<b>Education &amp; Training</b>	
Charter & Standards	<b>European Charter for education and training in Clinical Neuroradiology (diagnostic and interventional)</b>
CME	Please download the European Charter on Training of Medical Specialists in the EU as a PDF.
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**1. Preamble**

Interventional Neuroradiology is defined as invasive diagnostic and therapeutic interventions involving the Central and Peripheral Nervous Systems, Head & Neck, Brachio-cephalic vessels and Spine. Endovascular approaches represent one of the most complex aspects of interventional neuroradiology

**2. Definition and Objectives**

Interventional neuroradiology uses percutaneous and catheter technology, imaging and clinical expertise to diagnose and treat diseases of the head and neck, spine and the central nervous system.

The unique clinical and invasive nature of this specialty requires special training and skills:

- Be familiar with the signs and symptoms of disorders amenable to diagnosis and treatment by

- <http://www.esnr.org/en/research-exchange/>
- <http://www.esnr.org/en/education-training/charter-standards/>



### 1st Level:

ESOR - Galen Foundation Courses in Neuroradiology

### 2nd Level:

EDINR - European Diploma in NeuroRadiology based on the Pierre Lasjaunias Course in Neuroradiology, Diagnostic and Interventional

### 3rd Level:

European Diplomas of Higher Qualification in:

- Interventional Endovascular Neuroradiology
- Interventional Spine Neuroradiology
- Advanced Diagnostic Neuroradiology
- Paediatric Neuroradiology (EDIPNR)
- Head & Neck Radiology

The European Society of Neuroradiology (ESNR) committee is not an official certifying body yet. However, the ESNR-endorsed qualification confirms proof of additional training in addition to any national qualifications. Nonetheless, the European Diploma in Neuroradiology (EDINR) represents a standard of Neuroradiology training across Europe through attendance at the Pierre Lasjaunias European Course of Neuroradiology (ECNR) and proof of understanding by passing the various components of the individual course examinations as well as of the final examination, objective high quality test of knowledge at the end of training and certificate of excellence.

- Dans le monde :

**WFITN** : formation sur 6 ans

- 1 year of basic diagnostic imaging
- 18 months of diagnostic neuroradiology
- 18 months of clinical neurosciences
- 2 years of interventional neuroradiology

### Standard in practice

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During the past decades we all have spend a lot of time to construct the future of the speciality we had grown together. We progressed in the understanding and classification of various diseases allowing for a better selection of therapeutic indications and goals. That occurred first within the frame of the WIN, then in more official structures that we created together, in particular the World Federation of Interventional and Therapeutic Neuroradiology, WFITN.

Coming from different specialities, from different countries and continents, and practicing in various types of hospital structures, we tried together to propose standards of training and practice.

These recommendations helped us advance yet new challenges have appeared to day. INR is practiced today by an ever increasing number of practitioners not always optimally trained, and various specialists try to highjack NRI resulting in its fragmentation.

*Luc Picard, Pierre Lasjaunias*




[Download in PDF format](#)

- *Progrès récents des systèmes de thrombectomie mécanique → taux de recanalisation élevé*



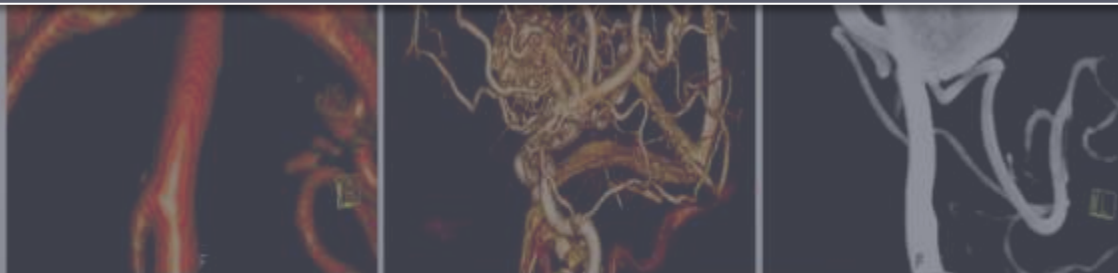
- *Augmentation potentielle du nombre de strokes (possiblement une centaine par centre).*

*Notre société savante a-t-elle anticipé cette augmentation d'activité ?  
Augmentation moyens humains ?*

- 
- An anatomical drawing of a human spine, showing several vertebrae and intervertebral discs. The drawing is in a light, sketchy style. A white rectangular box is overlaid on the center of the image, containing text. The word 'KOPF' is visible on the left side of the spine drawing.
- **Rachis : qui fera les vertébroplasties ?**  
**Les pionniers partent à la retraite. Qui pour les remplacer ? Orthopédistes ? Neurochirurgiens ? Rhumatologues ? Radiologues ostéo-articulaires ?**

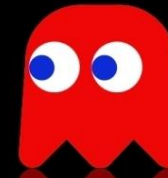
## Bienvenue sur notre site

- ***Le DIU de NRI sera-t-il un jour sanctionnant pour exercer la NRI***



Responsables du site: [Frédéric Clarençon](#) & [Aymeric Rouchaud](#)





***La NRI est-elle condamnée à se faire phagocyter par les services de radiologie interventionnelle périphérique ?***

# Enseignement/formations pratiques

Workshop organisés / différents services  
DIU NRI  
Formations pratiques proposées / labos

European course of INR  
ESMINT course

*La majorité des formations sont assurées/  
sponsorisées par compagnies*



- **Sommes-nous condamnés à rester inféodés aux laboratoires pour assurer notre formation pratique ?**

## Recherche/mobilité

- *A-t-on une visibilité sur les activités de recherche à l'échelon national et sur les thématiques de recherche ?*
- *Que fait la SFNR pour favoriser les mobilités recherche à l'étranger ?*

***Merci de votre attention***

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