Universidad de Navarra

Facultad de Ciencias

MÁSTER EN INVESTIGACIÓN BIOMÉDICA

Research Project Proposal

Academic year 2024-2025

Instrucciones para completar el documento: Mantenga el mismo estilo de letra y formato.

This form must be filled in ENGLISH

Project Nº (Nº a completar por el Máster)
Title: *Brain PET with 18F-FDG in the diagnosis of autoimmune encephalitis: syndromic and antibody-based patterns.*
Department/ Laboratory *Department of Nuclear Medicine and Neurology, Clinica Universidad de Navarra, Pamplona.*
Director 1 *Javier Arbizu;(If there will be two co-directors indicate both)* **Contact:** *jarbizu@unav.es* **Codirector:** *Elena Prieto* **Contact:** *eprietoaz@unav.es*

Summary *Short summary of the project with a **maximum extension of 250 words**, including the goals and the methodology that will be used.*

The aim of the project is to analyze the impact of the use of FDG PET imaging in the diagnostic protocol of autoimmune encephalitis.

It is a multicenter retrospective observational study in which the different clinical and imaging data obtained in the different participating centers in which FDG-PET studies have been performed will be collected. The data will be used to generate a database that will be left open for use by other investigators.

Population

Adult patients with subacute onset neurological deterioration meeting clinical criteria for autoimmune encephalitis who have undergone a brain study with 18F-FDG in the clinical setting will be recruited. All available cases with a definitive diagnosis made within the last 10 years will be included according to the following criteria (Graus F et al. Lancet Neurol. 2016 Apr; 15(4): 391-404):

- Neurological clinical picture of subacute onset (rapid progression in less than 3 months) characterized by memory impairment (short-term memory failures), altered level of consciousness or changes in personality, or psychiatric manifestations.

- Focal neurological signs (CNS)

- Seizures not attributable to a previously known epileptic syndrome.

- CSF pleocytosis

- Radiologic findings suggestive of encephalitis (T2/FLAIR hypersignal restricted to one or both medial temporal lobes [limbic encephalitis], or focal areas involving subluxated substances [limbic

encephalitis], or focal areas involving subluxated substances [limbic encephalitis], or focal areas involving subluxated substances [limbic encephalitis].

- Detection of onconeuronal or surface antigen antibodies.

- Reasonable exclusion of other alternative causes.

We contemplate the following tasks:

- Creation of the application for the introduction of clinical data. Harmonization of the PET equipment of the participating centers by means of dummies and quality controls.

- Data collection and recruitment of neuroimaging studies.

- Analysis of FDG PET images to define specific patterns of brain metabolism related to clinical syndromes (limbic and non-limbic encephalitis) as well as the most frequently involved antibodies.

yes	
no	X

Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?

Enviar a mnrahona@unav.es en formato WORD