Collection of Biological Samples of Neuroendocrine Tumors (NET) for Biomedical Research: The Discovery Project of GETNE Group

Paula Jimenez-Fonseca[1]; Jaume Capdevila[2]; Angel Castaño[3]; Carlos López[4]; Marta Benavent[5]; Carles Villabona[6]; Aurora Astudillo[1]; Ignacio Matos[2]; Raquel García Velasco[3]; Santiago Montes[4]; Ramón Salazar[6]; Rocío García-Carbonero[5]

[1]Hospital Universitario Central Asturias, Oviedo, Spain.
[2]Hospital Universitario Vall d'Hebron, Barcelona, Spain.
[3]Hospital Universitario de Fuenlabrada, Madrid, Spain.
[4]Hospital Universitario Marqués de Valdecilla, Santander, Spain.
[5]Hospital Universitario Virgen del Rocio/Instituto de Biomedicina de Sevilla (IBIS) [HUBVR, CSIC, US], Sevilla, Spain.
[6]Hospital Universitari Bellvitge-ICO, L'Hospitalet de Llobregat, Spain.

Background: The NET Discovery project of the Spanish Cooperative Group on NETs (GETNE) aims to build up a large nationwide biological sample collection linked to high quality clinical information of patients with NETs, through the cooperation of multiple institutions of the GETNE network. This initiative seeks to promote quality translational research adapted to clinical needs, including the identification of biomarkers of potential diagnostic, prognostic or therapeutic interest, and of predictive factors of efficacy and/or toxicity of therapy.

Methods: The collection was initiated in 2013 coordinated by GETNE, who has elaborated SOP for sampling, processing, storage and transfer of biological samples according to the legislation in force. This collection is structured based on 6 hubs or coordinating centres that are responsible for their own samples and for those referred from other centres from their geographic region. Biological samples collected include tumor

tissue, whole blood, serum and saliva, and sample information is registered in a unified database linked to the clinical information from the national Spanish registry of gastroenteropancreatic NETs (RGETNE).

Results: As of June 2015, GETNE has over 2000 patients prospectively recorded in the clinical national registry RGETNE, with 339 samples linked to this registry (131 bloods, 122 serum, 119 tumor tissues). The first research project to be conducted within the NET Discovery Platform has been initiated (NETSEQ), which aims to analyze mRNA expression in midgut NETs using Nanostring Ncounter Technology. The results of this and other upcoming projects will be presented in future conferences and published accordingly.

Conclusions: The NET Discovery project has proven to be an efficient way to gather a significant number of adequately annotated biological samples that are of great value to carry out biomedical research with shall eventually improve the diagnosis and care of patients with different types of gastroenteropancreatic NETs.