

Evaluation of *H. pylori* in Peruvian gastric cancer through RT-PCR

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BACKGROUND: Gastric cancer is highly prevalent in Peru. The infection by *Helicobacter pylori* has been accepted as a causal agent for gastric cancer. Eradication of *H. pylori* may help to reduce the occurrence of gastric cancer. **HYPOTHESIS:** Prevalence and levels of *H. pylori* are high among Peruvian gastric cancer samples. **METHODS:** A research project about prevalence of *H. pylori* among Peruvian patients with gastric cancer was accepted for a government funding (FINCyT 430-PNICP-PIAP-2014) and was approved by IEC with number: INEN 15-10. We organized coordination meetings between Gastric Cancer Surgery Unit, Tumor Tissue Bank and Research Department Team to begin with the storing frozen gastric samples from patients who came to the Institute with a diagnosis of gastric cancer since April 2015. We developed a logistic and methodology fluxogram for samples coming from surgery and endoscopy room and pathology lab. **RESULTS:** A median of 6 and 3 (tumor, proximal and distal tissue) samples were obtained from each case for surgery and endoscopy, respectively. During this time, we collected 570 samples (547 from surgery and 23 from endoscopy) from 118 cases and storage in a Forma™ 900 Series -86°C Upright Ultra-Low Temperature Freezer machine (Thermo Fisher Scientific). DNA samples were extracted using the GeneJET Genomic DNA Purification Kit (Thermo Fisher Scientific), in accordance with the manufacturer's instructions and DNA quantitation using Qubit dsDNA HS Assay and Qubit 2.0 fluorometer (Thermo Fisher Scientific). Until date, 42 samples were evaluated in a Thermal cycler Mastercycler Nexus Gradient (Eppendorf – propriety Institut de Recherche pour le Développement, IRD, France) and quality control was proved for them. Next months we will perform *H. pylori* detection in gastric samples with *H. pylori* specific primers (*vacAs*; *vacAm*; 5' *cagA*; 3' *cagA*; *hspA*; *ureA*; *CagA*; and *rpoB* genes). Tumor tissue bank implementation allow a optimal sample collection and storage for molecular analysis. Valuable information about gastric cancer and *H. pylori* relationship is reached by a fluxogram between a multi- and inter-disciplinary areas. During meeting, we will show *H. pylori* detection in gastric samples with *H. pylori* specific primers results.