Her2 OVEREXPRESSION IN VARIOUS TUMOUR TYPES: FISH AND IMMUNOHISTOCHEMISTRY (IHC) EVALUATIONS. Leite KRM[1], Gattás GJF[1,2], Barbutto JA[1], Meirelles MI[1] , Carvalho CM[1], Darini E[1], Camara-Lopes LH[11] Laboratório de Patologia Cirúrgica e Molecular do Hospital Sírio Libanês; [2] Departamento de Medicina Legal, Ética Médica e Medicina Social e do Trabalho, Faculdade de Medicina, USP. gfgattas@usp.br

Overexpression of Her2 has been evaluated in a wide variety of tumors mainly by IHC methods. A Her2-positive status has been associated with poor prognosis in tumor types including breast, ovarian/endometrial, non-small cell lung cancer, bladder, salivary gland and pancreatic cancer. The Her2 proto-oncogene encodes a growth factor receptor that plays a key role in the pathogenesis of tumour aggressive behavior. The specific suppression of Her2 receptor extracellular domain using anti-Her2 monoclonal antibodies (Herceptin) in clinical trials demonstrates that this therapy improves objective responses rates in tumour progression. There are not so many reports comparing Her2 overexpression (IHC) and gene amplification (FISH) in different tumours than breast cancer. The aim of this report is to show our data of Her2 amplification from the following tumour types: gastrointestinal (10), lung (4), prostate (4), and, one case of bladder, ovary, endometrial, and, tongue cancer, totaling 22 samples. The paraffin-embedded blocks were analyzed by IHC using the monoclonal anti c-erB-2 oncoprotein and by FISH using the multicolor Vysis probe (PathVysion™ HER-2 DNA *probe*). The gene amplification was detected in 2 cases of gastrointestinal tract cancer (20%) presenting score 2+ but absent in the only case score 3+. In the other 12 tumours score 2+, the Her-2/neu FISH amplification was detected in two cases (lung and endometrial cancers). If one considered tumours all together, the gene amplification was identified in 22% (4/18) of the cases score 2+. These lesions showed an diffuse membranous staining pattern on more than 10% of neoplastic cells. All the three cases with score ≤ 1+ didn't show Her-2/*neu* amplification by FISH (evaluation performed on metastatic nodules). The observed results are in agreement with the literature, where the frequency of gene amplification in positive tumours is lower than expected suggesting that overexpression is due to gene deregulation rather than gene amplification. Órgão Financiador : não tem