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Abstracts

FP5
Quality indicators of clinical cancer care (QIC) in the territory of canton Ticino: preliminary results in colorectal cancer

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Background. Quality of cancer care (QoCC) studies showed an improvement in the oncologic cares. QoCC can vary depending on the particular medical condition, with deficits in the adherence to recommended processes for basic care being frequently observed. One of the main challenges in the previous studies was due to the delay from the analysis of the first specimen in pathology and the registration of the incident cases at the cancer registry (CR).

Patients and methods. The QIC3 is a prospective (01.01.2011-31.12.2013) population-based study, which analyses the QoCC of colorectal (CRC), prostate, ovarian, endometrial and lung tumours in Canton Ticino. We selected the patients and relative cases, incident since 2011, treated both in the regional public and private hospitals. The peculiarity of the Ticino CR is of being located inside the cantonal institute of pathology: the incident cases are recorded real-time. With the aid of working groups, we identified for each localization a list of quality indicators (QI), then selected by a two-round modified Delphi process and validated by an international Advisory Board.

Results. We present the preliminary results of the CRCs incident in 2011 (n=243), for whom we have defined the QI. The initial CRC QI (n=149) underwent the process shown above, and 74 were finally selected: we present a list of 16 QI.

Conclusions. This study aims to produce evidence-based QI, whom application could allow an immediate change in the diagnostic-treatment process that could be translated in a short-term benefit for patients and as target values for analogue studies.

FP6
CD30 expression in peripheral T-cell lymphomas, not otherwise specified: is it relevant to the identification of distinct subgroups?

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Background. The largest peripheral T-cell lymphoma (PTCL) entity, designated as not otherwise specified (PTCL, NOS), is a heterogeneous by default group of aggressive neoplasms with indistinct borders. By gene expression profiling (GEP) we previously reported unsupervised clusters of PTCL, NOS correlating with CD30 expression. The present work was designed to extend the analysis of PTCL molecular profiles to prototypical CD30+ PTCL (anaplastic large cell lymphomas, ALCL), and to validate GEP findings at the protein level.

Methods. Published GEP datasets from our two previous studies were reanalyzed by gene set enrichment analysis. Twenty-one markers were selected for immunohistochemical validation on 80 PTCL samples (CD30+ and CD30- PTCL, NOS, ALK+ and ALK-ALCL), and differences between subgroups were assessed. Clinical follow-up was recorded.

Results. CD30+ PTCL, NOS, compared to CD30- tumors, were significantly enriched in ALK- ALCL-related genes. By immunohistochemistry, CD30+ PTCL, NOS differed significantly from CD30- samples (downexpression of T-cell receptor-associated proximal tyrosine kinases (Lck, Fyn, Itk) and of proteins involved in T-cell differentiation/activation (CD69, ICOS, CD52, NAPATc2); upregulation of JunB and MUM1), while overlapping with other CD30+ PTCL, particularly ALK- ALCL. CD30+ PTCL, NOS tended to have an inferior clinical outcome compared to the CD30+ subgroups.

Conclusions. We demonstrate molecular and phenotypic features common to all CD30+ PTCL, with striking similarities between CD30+ PTCL, NOS and ALK- ALCL, and significant differences between CD30- and CD30+ PTCL, NOS. These results suggest that CD30 expression might be relevant to the delineation of two biologically distinct subgroups of PTCL, NOS.

FP7
Different oncogenetic pathway in a mixed adenoneuroendocrine carcinoma (MANEC) of the stomach

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Background. Mixed adenoneuroendocrine carcinomas (MANEC) of the stomach are rare neoplasms associated with a poor outcome. In order to elucidate the oncogenetic pathway of MANEC we decided to selectively dissect with laser capture microdissection (LCM) the two components and to study the genetic status in both.

Methods. A 45-year-old woman presented with a carcinoma in the cardia made by two different components. Immunohistochemistry was used to evaluate common neuroendocrine markers, PTEN and Her2/Neu (evaluated also by FISH), LCM (ZEISS PALM Microbeam) was performed separately on the two components and DNA was extracted. Microsatellite instability (Bethesda panel), KRAS, BRAF, PIK3CA and EGFR genes were analyzed by PCR and direct sequencing of the exon 2 for KRAS, exon 15 for BRAF, exons 9 and 20 for PIK3CA and exons 18–21 for EGFR.

Results. Histology showed a 60% of adenocarcinoma (AC) and a 40% of poorly differentiated large cell neuroendocrine (NE) carcinoma. Immunohistochemistry showed expression of NE markers (synaptophysin, chromogranin) in the NE component and no expression in the AC component. No expression was found with PTEN and HER2/neu, even by FISH. Both components were found to have microsatellite instability, wild type BRAF and RAS. A mutation in the PIK3 pathway (namely E545) was found exclusively in the NE component.

Conclusions. The different mutation pattern found in the NE component warrants studies in larger series. As poorly differentiated NE carcinoma may influence the prognosis of this cancer type, molecular pathology studies on both tumor components may be appropriate.