

ESP Abstracts 2014

Oral Free Paper Sessions

Sunday, 31 August 2014, 08.30–12.00, ICC Capital Suite Room 1
OFP-01 Oral Free Paper Session Digestive Diseases Pathology I

OFP-01-001

Pathological diagnostic criterion of blood and lymphatic vessel invasion in colorectal cancer: A framework for developing an objective pathological diagnostic system using Delphi method

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Objective: The goal in this study is to create an objective pathological diagnostic system for blood and lymphatic vessel invasion (BLI).

Method: H&E stained slides with or without histochemical/immunohistochemical staining were assessed by eight pathologists and concordance of BLI assessment was checked. In addition, histological findings associated with BLI having good concordance were reviewed. Based on these results, framework for developing diagnostic criterion was developed, using Delphi method. The new criterion was evaluated using 40 CRC specimens.

Results: Concordance was low for BLI diagnosis and was not any better when histochemical/immunohistochemical staining was provided. All histological findings associated with BLI from H&E staining were poor in agreement. However, observation of elastica-stained internal elastic membrane covering more than half of circumference surrounding the tumor cluster as well as the presence of D2-40-stained endothelial cells covering more than half of circumference surrounding tumor cluster showed high concordance. Based on this observation, we developed a framework for pathological diagnostic criterion, using Delphi method. This criterion was found to be useful in improving concordance of BLI diagnosis.

Conclusion: A framework for pathological diagnostic criterion was developed by reviewing concordance and using Delphi method. The criterion developed may serve as the basis for creating a standardized procedure for pathological diagnosis.

OFP-01-002

Combined epiregulin (EREG) and amphiregulin (AREG) expression levels as a biomarker of prognosis and panitumumab benefit in RAS-wt advanced colorectal cancer (aCRC)

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Objective: RNA expression of EGFR ligands EREG and/or AREG has been reported to correlate with the efficacy of EGFR-targeted therapy in

aCRC. We examined both ligands and MEK-AKT pathway mutations in patients in a large randomised trial of panitumumab.

Method: AREG & EREG expression and KRAS, NRAS & BRAF mutations were assessed in archival tumor from 323 pts randomised to irinotecan (Ir) or irinotecan/panitumumab (IrPan) as 2nd-line treatment of aCRC. Ligand expression was classified as “high” (EREG and/or AREG in top tertile for mRNA level) or “low” (EREG nor AREG in top tertile).

Results: High ligand expression was not a statistically significant prognostic biomarker (HR 0.79, $p=0.15$). For RAS-wt pts with high ligand expression, median PFS was 8.3 months (IrPan) vs 4.4 months (Ir); HR=0.62, $p<0.001$. Conversely, RAS-wt pts with low expression gained no benefit: 3.2 months (IrPan) vs 4 months (Ir), HR=0.97, $p=0.73$. The ligand-treatment interaction was $p=0.01$.

Conclusion: High ligand expression predicts panitumumab benefit on PFS in RAS-wt pts, but no benefit with low ligand expression. This work confirms that EREG and AREG are potentially useful biomarkers for anti-EGFR therapy.

OFP-01-003

Immediate ex vivo intra-arterial methylene blue injection may improve the detection of lymph node metastases in colorectal cancer

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Objective: Lymph node (LN) assessment after colorectal cancer resection is fundamentally important for therapeutic and prognostic reasons. LN positivity is an indication for adjuvant treatment. This study aimed to investigate whether immediate postoperative intra-arterial methylene blue (MB) injection (MBI) into colorectal cancer specimens by a surgeon in the operating room could improve the rate of total LN and metastatic LN recovery for pathological examination.

Method: Seventy-three consecutive patients prospectively enrolled between January 2011 and December 2013 were assigned to the methylene blue (MB)-stained group and compared with 107 controls in the unstained group.

Results: The mean number of metastatic LNs, the number of LNs <0.5 cm, and the total number of LNs harvested were significantly different between the MB-stained and MB-unstained groups ($p=0.016$, $p=0.010$, and $p=0.025$, respectively). Multivariate analysis showed that age ($p=0.001$), lymphatic invasion ($p=0.001$), perineural invasion ($p=0.001$), and MBI ($p=0.006$) were independently associated with the detection of LN metastasis.

Conclusion: Immediate MBI (fresh, unfixed samples) by a surgeon in the operating room may result in a significant increase in the number of metastatic LNs diagnosed and the number of cases with positive LNs.