Method: Fifteen consecutive patients with SP were selected in our files. Polyps (n=258) were classified according to the World Health Organization classification (conventional adenomas (CA), sessile serrated adenomas/polyp (SSA/P), traditional serrated adenomas (TSA), hyperplastic polyps (HP)). CRCs (n=13) and polyps (n=31) were evaluated for mismatch repair proteins (MMR), BRAF mutated V600E protein, p53 and beta-catenin expression using immunohistochemistry.
Results: Residual adenomatous lesions (4 tubulo-villous CAs, 4 SSA/Ps) were identified beside CRCs. Polyp number per patient ranged from 6 to 51, with 89 % of serrated polyps (44 HPs, 130 SSA/Ps, 47 dysplastic SSA/Ps). Eight CRCs and 1 SSA/P with high and low-grade dysplasia were MLH1-/PMS2-. One CRC was MSH2-/MSH6-. Five of 24 SSA/Ps were BRAF V600E+.
Conclusion: SP seems to be a possible although rare presentation of Lynch syndrome with MSH2 mutation. Serrated adenomas and conventional adenomas seem to be both involved in carcinogenesis in SP.

OFP-03-007
Expression pattern of TrkB in colorectal cancer supports anoikis-resistance as a survival mechanism for tumor budding cells
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Objective: Tumor buds in colorectal cancer represent an aggressive subgroup of non-proliferating, non-apoptotic cells. We hypothesize that survival of tumor buds is dependent on resistance to anoikis. Here we investigate the role of TrkB, a promoter of epithelial-mesenchymal transition (EMT) and anoikis-resistance in facilitating a pro-tumor budding phenotype.
Method: TrkB immunohistochemistry was performed on a multiple-punch tissue microarray of 211 colorectal cancer patients. Cytoplasmic (cTrkB) and nuclear (nTrkB) staining were evaluated in tumor and buds. KRAS/BRAF mutations were investigated. Correlation with a panel of EMT-related proteins was performed.
Results: cTrkB and nTrkB were strongly inversely correlated in tumor (r=−0.38; p<0.0001) and tumor buds (r=−0.41; p<0.0001). cTrkB was associated with high-grade tumor budding (p<0.0001), KRAS mutation (p=0.0008) and expressed frequently in tumor buds (100/154 cases; p<0.0001). nTrkB was expressed in low-grade budding cases (p=0.0073), BRAF wild-type tumors (p=0.0519) and expressed infrequently in tumor buds (34/154; p<0.0001). cTrkB and nTrkB protein profiles corresponded to pro- and anti-budding phenotypes, respectively.
Conclusion: These results underline functional differences of TrkB dependent on cellular localization with cTrkB promoting a pro-budding phenotype. Moreover, our findings support the notion of anoikis-resistance as a survival mechanism for budding cells in colorectal cancer.

OFP-03-009
Primary Biliary Cirrhosis (PBC): A new histological scoring system allows a standardized and reliable evaluation of lesions with known prognostic significance
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Objective: In PBC, an accurate evaluation of liver lesions predictive for progression or survival (fibrosis, lymphocytic interface hepatitis (LIH), ductopenia) is crucial. Presently there is no satisfactory system analyzing them reliably. We elaborated a semiquantitative scoring system and evaluated its intra/interobserver reproducibility.
Method: Fibrosis was classified into 4 stages (portal/periportal fibrosis, few septa, numerous septa, cirrhosis) and LIH into 4 grades. The bile duct ratio (BDR=portal tracts with ducts on total number of portal tracts) and Ludwig's stage were also evaluated. 33 liver biopsies (HE, picrosirius red) were independently analyzed by 5 liver pathologists. Intra and interobserver agreement were assessed (multireader Light's kappa, Washington intraclass correlation).
Results: The biopsies measured 23 mm [12–40 mm]. Five had numerous fibrous septa or cirrhosis and five had severe LIH. The mean BDR was 0.75. Intraobserver reproducibility was substantial for fibrosis (k=0.78), LIH (k=0.69) and BDR (ICC=0.69). Interobserver reproducibility was moderate for fibrosis (k=0.56), LIH (k=0.59), BDR (ICC=0.5). Ludwig's staging had a fair intra and interobserver reproducibility (k=0.26, k=0.32 respectively).
Conclusion: This scoring system assesses the prognostic lesions with a substantial intraobserver and a moderate interobserver reproducibility. It is more reliable than Ludwig's staging. It will likely improve the quality and robustness of the histopathological results in PBC.

OFP-03-010
E2F-1 immunophenotype is an independent marker of poor prognosis in human hepatocellular carcinoma
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Objective: E2F-1 transcription factor induces expression of genes controlling G1/S phase transition, DNA synthesis/repair, and apoptosis. E2F-1 activation depends on pRb phosphorylation. We have shown that E2F-1 is overexpressed and pro-apoptotic in hepatocellular carcinoma (HCC), while others have suggested that increased apoptosis in HCC could be indirectly oncogenic*. The prognostic significance of E2F-1 immunoexpression in human HCC has not as yet been clarified.
Method: Immunohistochemistry for E2F-1 and phospho(Ser795)pRB was employed on 57 surgically resected HCCs (grade I:8,II:24,III:16,IV:9). Patients were followed for 39.7±27.2 months.
Results: Nuclear E2F-1 (nE2F-1) immunoexpression was observed in 32/57(54.3 %) HCCs and correlated with phospho(Ser795)pRB immunoexpression (p=0.045), indirectly suggesting E2F-1 transcriptional activity. E2F-1 cytoplasmic immunoexpression (cE2F-1) was observed in 46/57(80.7 %) HCCs. There was no significant correlation of nE2F-1 or cE2F-1 with clinico-pathological parameters. Portal vein thrombosis and nE2F-1 immunophenotype were correlated with poor overall survival (p=0.05 and p=0.0001, respectively), but not with recurrence-free survival. Stepwise Cox regression analysis highlighted nE2F-1 as an independent marker of poor prognosis in HCC (95 % CI=2.55–52.43, p=0.002).
Conclusion: E2F-1 is expressed and transcriptionally active in the majority of human HCCs. E2F-1 immunophenotype is an independent marker of poor overall patient survival in a cohort of Greek HCC. * Virchows Archiv 2012;460:439–46

Sunday, 1 September 2013, 17.00–19.00, Room 5B
OFP-04 Oral Free Paper Session IT in Pathology

OFP-04-001
The Case Database of the European Congresses of Pathology: Current status and planned features
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Objective: The ECP Case database consists of Case presentations from the ECP/ESP congresses, years 2006–2012. The objective is to continuously expand and improve the contents and functionality of the database, and make it available for educational purposes.
Method: Slides of cases presented in the ECP slide seminars have been digitized and published online since 2006. The virtual slides together with case data (background, snapshots, diagnosis, handout) have been collected into a single repository. The database has been made available through a web site (http://www.webmicroscope.net/casedatabase) with interactive functions such as browsing by topic/working group, searching and a quiz/