self test mode. The database is designed to be hosted on a network of campus servers
Results: After the ECP 2012 there were 634 cases with 3201 images included in the database. These cases have been contributed by 427 authors. The database will be expanded in 2013 with high-quality case presentations from the ECP in Lisbon.
Conclusion: The ECP Case Database is a significant educational resource, and continues to grow.

OFP-04-002
The first results of Latvian national tissue biobank and the novel elaborated biobank information database system: Status report after the first 3 years of experience
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Objective: The objectives and goals of the first national Latvian biobank project are to develop, build and utilize cutting edge tissue biobank and databasae in Latvia containing samples of common malignant tumours and elaborate a multifunctional easy to use biobank database system.
Method: 1,655 patients with oncological and premalignant diseases were enrolled in the study. Biobank information systems run on the operating system MS Windows 7 Professional. Server runs on MS Server 2008 R2 Standard environment, MS Windows SQL Server 2008 R2 Standard served as a database management system.
Results: In total 1,655 patients with oncological and premalignant diseases were enrolled in the study during the 2010–2012. Our database comprised a total of 1,655 cases covering all types of frequent human malignancies: breast cancer (30.64 %), gastric (22.78 %), colorectal (15.52 %), prostate (17.38 %) and thyroid (13.78 %). The novel biobank information database was developed which fulfils all major biobanking criteria and extends these. The advantages of novel biobank information system are easy entry, retrieval and storage of information.
Conclusion: The first Latvian biobank including malignant disease, premalignant conditions and autoimmune disease was elaborated. The novel easy to use and reproducible biobank information database system was developed and adapted.

OFP-04-003
A Swedish government-funded project for distance diagnostics, consultative expert networks and multi-disciplinary team support
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Objective: A project aiming to create a system and workflow for distance diagnostics, consultative expert networks and multi-disciplinary team support. Three main scenarios: 1. Department that has long term or short term demand for analysis capacity. 2. Expert node with specific competence, serving a larger region. 3. Collaboration across sub-specialist areas in virtual multi-disciplinary teams to enhance the diagnostic quality and provide more effective treatment. The aim is complex as it transverse the organizational and sub-specialist boundaries that exists today enabling exchange of competence and capacity to provide the patient with the best care possible. The project also manages technic, regulations, reimbursement and patient security.
Method: 300 patient cases will be sent for pathology distance reading between two different counties in Sweden. Stockholm County Council—a large urban region and Blekinge County Council—a small region in the countryside. Much effort is being placed in risk-analysis and quality controls.
Results: The project is on-going. Distance reading is today being tested with real patient data between the two county councils. Simultaneously a prototype for multi-disciplinary team support is being put together.
Conclusion: Conclusions and results so far will be presented at ECP 2013 if abstract being accepted.

OFP-04-004
Next-generation tissue microarray (ngTMA) strengthens pathology biomarker research: An exemplary study of the tumor microenvironment using CD3, CD8, and CD45RO in six different solid tumor types
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Objective: We defined next-generation tissue microarrays (ngTMA) as the combination of strategic TMA planning, histological expertise, digital pathology and automated tissue microarraying. The aim is to test ngTMA focusing on the immune-score (CD3, CD8 and CD45RO) within the tumor microenvironment of six tumor types.
Method: Ten cases each of malignant melanoma, lung, breast, gastric, prostate and colorectal cancers were reviewed. One representative H&E slide was scanned and uploaded onto a digital slide platform. Using different colors, 1 mm TMA annotations were placed directly onto the digital slide. Selected regions of normal tissue (n=1), tumor center (n=2), tumor front (n=2), and tumor microenvironment (n=2) were annotated. Donor blocks were loaded into an automated tissue microarrayer. Using donor block images and annotated digital slides, transfer of 420 tissue cores created two ngTMAs. CD3, CD8 and CD45RO immunohistochemistry were performed.
Results: Scanning time was <10 h; annotation time was 1 h. Punching of tissue cores and transfer took 12 s/core. ngTMA construction took 1.4 h. Desired histological regions including tumor-stroma interaction captured the T-cell response.
Conclusion: ngTMA is a well-defined process based on planning and design, digital pathology, histological annotations and automated tissue microarraying. ngTMA is a promising approach that clearly supports the role of pathologists in translational research.

OFP-04-005
Quantitative measurements of cell density and proliferative markers by image analysis
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Objective: Cell distribution and cell density are the main characteristic for tumor pathology. We do not yet understand how many cells inhabit a tumor from a 1 sq mm sample of histology slide. We analyzed a total number of tumor cells in breast cancer; renal cell carcinoma; lung carcinoma (NSC), and endometrial carcinoma and proliferative activity (% Ki67-positive cells) to establish the precise quantity of tumor cells per sq.mm of histological slide and the relations of this measure with proliferation.
Method: The study included 46 breast carcinomas; 44 RCC; 21 NSCLC, and 35 endometrial carcinoma.
Results: Mean absolute tumor cells in 1 mm2 of histology slide was for breast cancer: 4,160+/−251, Ki67–31 %; NSCL: 4,102+\cr− 364 cells, Ki67–15 %; endometrial carcinoma: 7,073+\cr− 614, Ki67–31.9 %; RCC 4,389+\cr− 229, Ki67 11.62 %. There was moderate correlation between cell density and Ki67 for breast cancer r=0.42 (p=0.00018); for NSCL, r=0,41 (p=0,0,032), for endometrial carcinoma r=0,48 (p=0,0,059) and no correlation for RCC.
Conclusion: By analysis of these four types of cancer was established the quantity of tumor cells per mm2 and main the proliferative characteristics

OFP-04-006
Automatic detection of tumor areas by applying homology method
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