NG 3 cases, majority of the BCs belonged to Luminal B HER2 negative subtype (44.14%).

Conclusion: This study shows that molecular classification of BC by IHC is practical and is necessary for therapeutic decision and prognosis as molecular testing is not always feasible in routine laboratories.

68. DIAGNOSTIC AND PROGNOSTIC UTILITY OF MYB GENE REARRANGEMENT DETECTED BY FLUORESCENT *IN-SITU* HYBRIDISATION (FISH) IN ADENOID CYSTIC CARCINOMA

Peter P. Luk¹, Christina I. Selinger¹, Timothy J. Eviston², Rafael Ekmejian³, Denise Foo³, Jessica Tay³, Kan Gao², Sydney Ch'ng^{2,4,5}, Sandra A. O'Toole^{1,4,5}, Jonathan R. Clark^{2,3,4,5}, Ruta Gupta^{1,4,5}

¹Tissue Pathology and Diagnostic Oncology, Royal Prince Alfred Hospital, ²The Sydney Head and Neck Cancer Institute, ³University of New South Wales, Sydney, ⁴Central Clinical School, The University of Sydney, and ⁵Chris O'Brien Lifecare, Sydney, Australia

Background: MYB rearrangement has been described in a proportion of adenoid cystic carcinoma (ACC).

Aims: This study evaluates the diagnostic and prognostic utility of MYB rearrangement in ACC.

Methods: Salivary gland malignancies at the Sydney Head and Neck Cancer Institute (1989-2014) were reviewed. Histopathologic evaluation, and fluorescent *in-situ* hybridization (FISH) studies were performed on ACCs and their morphologic mimics. Clinical follow-up was obtained.

Results: 39 cases of ACC were identified with approximately 50% arising within the parotid gland. The age range was 19 to 80 years (median: 45 years). The tumor size ranged from 9-44mm (mean: 22mm). There were 3 locoregional recurrences, 7 distant metastases and 8 ACC related deaths seen over a 22-year follow-up period. Nodal metastases, although uncommon, were the most significant predictor of disease specific survival ($p=0.019$). 34 cases were suitable for FISH and 16 (47%) cases showed MYB rearrangement. MYB rearrangement was not seen in any cases of polymorphous low grade adenocarcinoma or epithelial myoepithelial carcinoma. MYB rearrangement was not seen in any of the high grade ACC or those with high grade transformation. MYB rearrangement was seen in 5 (50%) patients with recurrence/metastases and in 11 (45%) of those without.

Conclusions: FISH for MYB rearrangement has high specificity but low sensitivity for ACC. MYB rearrangement did not provide prognostic information in this cohort.

69. ANALYSIS OF KIT AND BRAF MUTATIONS IN CHINESE MELANOMA

Jiaojie Lv, Yunyi Kong, Xu Cai, Xiaoyan Zhou
Fudan University Shanghai Cancer Center, China

Background: Malignant melanoma is a rare disease in Asia, and knowledge of the status and the clinical significance of KIT and BRAF mutations in the Asian population is limited.

Aims: This study is designed to investigate the mutation status of KIT and BRAF in Chinese melanoma patients.

Methods: 144 cases of melanoma were analyzed for KIT mutations (exon9, 11, 13, 17) and BRAF (V600E, V600K, V600R) mutations by DNA sequencing using paraffin-embedded tissues.

Results and conclusions: There were 36.1% of acral lentiginous melanoma (ALM), 24.3% of mucosal melanoma (MCM), 4.8% of melanoma on skin with chronic sun-induced damage (CSD), 25.0% of melanoma on skin without chronic sun-induced damage (non-CSD), and others were unclassifiable disease. The overall incidence of somatic mutations within the BRAF and KIT genes was 25% and 9.0%, respectively. The incidence of BRAF mutation in acral, mucosa, CSD and non-CSD MM tissues was 15.4% (8/52), 2.9% (1/35), 57.1% (4/7) and 50.0% (18/36), respectively. Among the 36 patients with BRAF mutations, 88.9% (32/36) had V600E mutations. Melanomas with chronic sun-induced damage (CSD) were more likely (57.1%) to show BRAF mutations. KIT mutation in acral, mucosa, CSD and non-CSD MM tissues was 7.7% (4/52), 20% (7/35), 14.3% (1/7) and 2.8% (1/36), respectively. Mucosal melanoma were most likely (20%) to show KIT mutations. Among the 13 patients with KIT mutations, one had mutation in exon 9, 9 in exon 11 and 3 in exon 13. The most prevalent type in BRAF mutation is V600E while that in KIT mutation is p.L576p of exon 11. They could be considered as potential drug targets in advanced melanoma therapy.

70. TERMINAL DEOXYNUCLEOTIDYL TRANSFERASE (TDT)-NEGATIVE T-CELL LYMPHOBLASTIC LYMPHOMA DOES EXIST: A CASE REPORT

Li Ma¹, Morag Whyte², David Gillis³, Gael E. Phillips¹, Olivier Ramuz¹

¹Anatomical Pathology and Cytopathology, ²Paediatric Oncology, Lady Cilento Children Hospital, South Brisbane, and ³Immunology Pathology Queensland Central Laboratory Royal Brisbane and Women's Hospital, Herston, Queensland, Australia

Background: T-cell acute lymphoblastic leukaemia/lymphoma (T-ALL/LBL) is an aggressive neoplasm derived from T-cell progenitors that represents approximately 15% of childhood ALL cases. In conjunction with other features, TDT-positivity is considered as a hallmark for ALL/LBL. We report a case of TDT-negative T-LBL.

Case report: A 6 months-old male patient presented for an isolated anterior mediastinal mass with airway compression and elevated LDH. Histological assessment of needle core biopsy showed sheets of intermediate lymphocytes with monomorphic nuclei and high N:C ratio. Most tumour cells showed central eosinophilic nucleoli or small peripheral nucleoli. Apoptotic cells and mitoses were frequent. Immunohistochemistry showed expression of CD45, CD99, CD2, CD3, CD5, CD8, and BCL-2. Ki67 proliferation index was 80%. AE1/AE3, CD20, CD10, CD4, myeloperoxidase, EBER-ISH, and TDT were negative. Flow cytometry was concordant and detected surface alpha-beta TCR chains. Monoclonal rearrangement of both TCR-Gamma and TCR-Beta genes was detected. The features were consistent with T-LBL, medullary stage.

Discussion: T-ALL/LBL typically presents with blastic features. The mature morphology observed in this case may represent effect of steroids prior to biopsy. Cases of TDT-negative T-ALL/LBL are rare. T-LBL, medullary stage is the most mature stage of thymic development, for which lack of TDT expression is