LAST DAY OF WCLC: July 7th,2011

Afscheid Heineken! Goodbye Heineken!

We end off our final day at WCLC with highlighting some key Canadian researchers who presented today. Dr Denis Soulière presented results of a pooled analysis using data from two phase III, RCTs of erlotinib, BR.21 (erlotinib as 2nd or 3rd-line treatment) and SATURN (maintenance erlotinib) to determine the clinical utility of four biomarkers in the maintenance/second-line setting. These analyses suggest that *EGFR* IHC, *EGFR* FISH and *KRAS* mutation status do not predict for benefit with erlotinib after first-line chemotherapy. *EGFR* mutation results is definitely an important predictive factor in the first-line setting, but does not have the same role in predicting for benefit to maintenance/second-line erlotinib.*KRAS* mutations did have a negative prognostic effect on PFS and OS in this setting.

Dr Peter Ellis et al presented their research on Implementation of a National EGFR Testing Strategy in Canada. Five laboratories across Canada underwent a validation and quality control exercise for EGFR mutation testing. A total of 2,104 specimens were submitted for EGFR evaluation between March-December 2010. All patients had non-squamous histology. Demographic details are as follows: adenocarcinoma (91.6%); Asian ethnicity (13.9%); female (58%); light/never smoker (41.3%); stage IV disease (87.1%).Mutation rates were highest in those of Asian ethnicity (45.3%), followed by light/never smoker (27.9%), female gender (20.3%) and adenocarcinoma histology (17.5% (Figure 1). There was significant variation across the provinces in EGFR mutation rate (Figure 2). There was rapid uptake of EGFR mutation status into routine clinical practice in Canada. Patient demographics suggest that oncologists are adopting a selective approach to testing using clinical characteristics to select patients. However, the time to receive test results was nearly 3 weeks which might limit uptake in certain patient groups. Expansion in the number of testing centres might further increase uptake.

Figure 1: Subgroup analysis of EGFR mutation rate

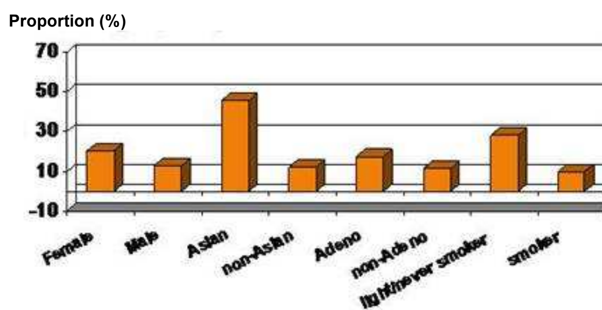
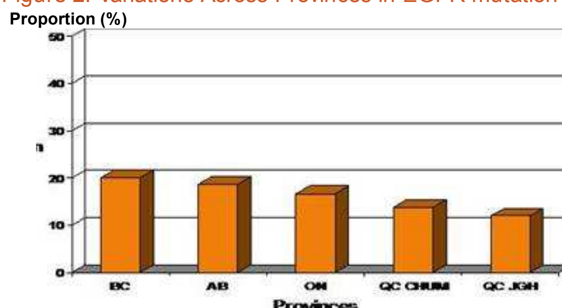


Figure 2: Variations Across Provinces in EGFR mutation status



Final thoughts…

- EGFR mutation results can help direct therapy in the first line setting but is not critical to make treatment decisions on the use of EGFR TKI in the second line/maintenance setting.
- EGFR Mutation Testing should be offered in the first line setting and a national strategy needs to be implemented to ensure adequate funding for this test and increase in the number of accredited testing sites to ensure timely results.

Thank you Canada and 'till next time!

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