Impact of patient age on molecular alterations in left-sided colorectal tumors


1Lombardi Comprehensive Cancer Center, Georgetown University, Washington, DC; 2USC Norris Comprehensive Cancer Center, University of Southern California, Los Angeles, CA; 3Cari Life Sciences, Phoenix, AZ

Abstract (3592)

114 rectal cancers from pts aged ≤ 45 years
229 LCCs from pts ages ≥ 50 years
31,750 CRC specimens hybridized (2009-2016)

Figure 1 – Diagram of LCC tumors included in this study.

Figure 2 – Demographics of the patient populations compared.

Figure 3 (A) and (B) – Distribution of immunohistochemistry (IHC) results in younger versus older LCC specimens and sub-analysis of rectal cancer cohort. Twenty-five biomarkers were evaluated by IHC for protein expression (younger cohort: median number of specimens analyzed per protein was 165 [range 89–208]; older cohort: median 342 [range 145–456]). Shown above are those where expression was present and available for comparison. No statistically significant differences were found in expression between LCC cohorts (A). A sub-analysis revealed significant differences in MSH2 and TS when analyzing younger (≤ 45 years) versus older (≥ 50 years) rectal cancer controls. (B) A similar comparison between rectal CA aged 40-49 and ≥ 50 years revealed no significant differences.

Figure 4 – Distribution of chromogenic in situ hybridization results in younger versus older CRC specimens. Differences in FISH (HER2) by IHC showed a trend towards higher rates of amplification in younger patients but was not statistically significant (P = 0.05). No significant differences were found in a comparison of CRC results between the younger and older patient cohorts.

Figure 5 – Meta-analysis Data of the studies included in the network analysis. The difference between MSH3 high (MSH3-H) in the cohorts did not reach statistical significance.

Figure 6 – TML-high (TML-H) in younger versus older CRC specimens. 17 mutations per megabase was used as the cutoff for TML-H.

Results

Results (continued)

References