A Demographic Description of the Response of Stage IV Primary Right and Left Sided Colon Malignancies to Therapeutic Intervention within Lehigh Valley Health Network.

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A Demographic Description of the Response of Stage IV Primary Right and Left Sided Colon Malignancies to Therapeutic Intervention within Lehigh Valley Health Network

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Background

- Colon cancer has diverse pathology based on embryology
  - Right colon (hindgut)
  - Left colon (midgut)
- Express different tumor markers due to this; KRAS present in 68% of L and linked to survival
  - KRAS reflects EGFR mutation
- Geographic variability in colon cancer due to multiple variables
  - Health disparities
  - Gut microbiome
- Left sided tumors nationally have better outcomes
- Right sided: later, advanced, and more common in women

Problem Statement

Primary colon tumors are thought to have differential outcomes based on multiple factors including right vs. left sided primary location, the prevalence of which has not yet been verified in the Lehigh Valley with demographic analysis

Methods

- Comprehensive review of literature and national data
- Database development with strict inclusion criteria applied
- 5 year retrospective chart review (2005-2010)
- Descriptive statistics generated
  - Categorical (counts/percentages)
  - Continuous (means/standard dev)
- Compared LVHN with national data

Visual Data & Results

- Table 1: Stage IV Patient Demographic Characteristics
- Figure 1: Tumor classification by specific location in colon in all patients vs stage IV patients
- Figure 2: Overall and progression free survival stratified by right and left colon (median, IQR)
- Figure 3: Tumor classification based on location demonstrating that stage IV population is similar to entire population of colon malignancies proportionally.

Discussion

- Within the Lehigh Valley, 52% of all primary colon malignancies are R sided
  - Nationally, 67%
  - Known screening and microbiome variability possibly implicated
  - Hypothesis driven studies needed
- 59% Stage IV right sided
  - Less national Stage IV data
- Study Limitations: Lack of follow-up, did not analyze based on chemotherapies

Conclusions

- At LVHN and nationally there is a higher prevalence of R-sided primary colon malignancies
  - However, to a lesser degree
- Right side=poorer outcome
- Real-time data needed
- Value added to patient care (shared decision making) with presentation of local demographic/survival data

REFERENCES:


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