

Abstract #5523: Cervical Cancer Geographical Burden Analyzer: An Interactive, Open-Access Tool For Understanding Geographical Disease Burden in Recurrent or Metastatic Cervical Cancer Patients

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INTRODUCTION

- Understanding the variation in geographic distribution of recurrent or metastatic cervical cancer (r/mCC) can identify regions with high need of intervention.
- r/mCC treatment landscape is rapidly evolving; use of commercial claims is an important way to follow dynamic practice changes.
- Our study objective was to understand recent differences in geographic distribution of r/mCC patients in the US.

METHODS

Study design and data source

- A retrospective claims analysis was conducted using the MarketScan® Commercial and Medicare Supplemental Database for adult cervical cancer (CC) and r/mCC patients diagnosed between January 1, 2015 and December 31, 2020.

Patient population

- CC was identified by ≥1 inpatient or ≥2 outpatient claims for malignant neoplasm of the cervix based on the International Classification of Diseases, Ninth and Tenth Revisions 180.xx and C53.xx.
- r/mCC patients were CC with further ≥1 claim for a selected systemic treatment for CC on or after the first CC diagnosis date, and beyond chemoradiation or surgery.
- Eligible patients were women ≥18 years continuously enrolled for ≥12 months of the measurement year (with a 30-day allowable gap)

Geographic distribution

- Geographic distribution of r/mCC patients was estimated in proportion to CC diagnosed patients at a given Metropolitan Statistical Area (MSA) in a given calendar year.
- Geographic distribution of CC was estimated in proportion to the total number of eligible enrollees for each MSA in a given calendar year.

MAIN TAKEAWAY

- There is quantified MSA-level geographic variation in r/mCC and CC rates across the US.
[Visit Open-Access Tool](#)
- Our online, publicly available **Cervical Cancer Geographical Burden Analyzer** can identify MSAs with disproportionately high disease burden to inform targeted interventions.

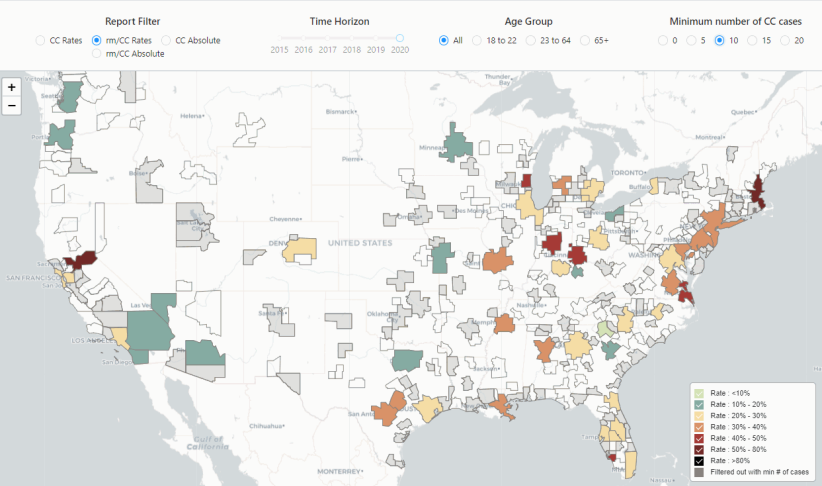


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RESULTS

Figure 1: Distribution of r/mCC patients by MSAs across the US.



- Distribution of r/mCC burden (Figure 1) shows large variation across MSAs, ranging from 0-83.3%.
- Table 1 shows the top 5 MSAs with the highest r/mCC burden from 2018-2020.
 - r/mCC rates in Sacramento-Roseville-Arden-Arcade (SRAA), CA and Boston-Cambridge-Newton (BCN), MA were on an increasing trajectory (33% in 2018 to 50% in 2020 in SRAA, CA; and from 41% in 2018 to 50% in 2020 in BCN, MA).

- While it remained high, r/mCC rates were on a decreasing trajectory in Grand Rapids, MI (55% in 2018 and 31% in 2020, resulting in an average r/mCC rate of 42%).
- r/mCC rates in Cape Coral-Fort Myers, FL and Baltimore-Columbia-Towson, MD over time but were consistently >30%.

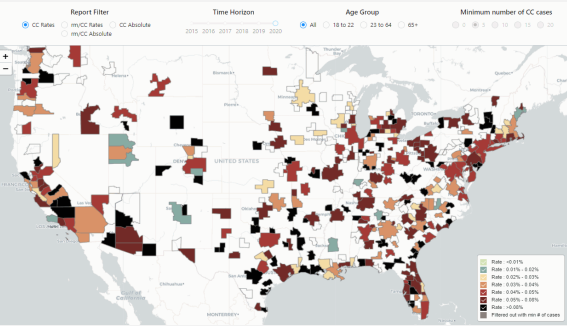
Table 1: Top 5 MSAs with highest burden and point prevalence of r/mCC in the US

MSA	2020	2019	2018	Average
Cape Coral-Fort Myers, FL	40%	31%	64%	45%
Sacramento-Roseville-Arden-Arcade, CA	50%	46%	33%	45%
Grand Rapids, MI	31%	36%	55%	42%
Boston-Cambridge-Newton, MA	50%	45%	41%	40%
Baltimore-Columbia-Towson, MD	38%	33%	39%	36%

As for the CC disease burden and its geographical disparity:

- Similar to r/mCC, there is substantial variation in geographical distribution of CC burden, with a range of 0-0.72%.
- CC burden is high particularly in the South, Northeast, and Midwest regions.

Figure 2: Distribution of CC patients by MSAs across the US.



FUTURE DIRECTIONS

- The Analyzer identifies areas in high need of r/mCC intervention.
- Current findings warrant further exploration into underlying causes of geographic variation to uncover potential drivers of r/mCC health disparities highlight unmet need in otherwise resourced populations with commercial payor sources