

# The Impact of COVID-19 Pandemic on Colorectal Cancer Screening and Treatment: Preliminary Results of a Community Hospital Based Study

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# Collaborators

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# Disclosure

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- The authors received no specific funding for this work.

# Background

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- Colorectal cancer (CRC) is the third most common cause of cancer mortality worldwide, with more than 1.85 million cases and nearly 850,000 deaths annually.
- Early detection through screening is essential to reduce the mortality associated with CRC.
- The COVID-19 Pandemic has significant restraints on healthcare systems, raising multiple concerns regarding care delays and excess cancer-related deaths.
- A recent study that was conducted at the University of Pennsylvania Health System\* concluded that the COVID-19 surge was associated with a 45% decline in new patient visits for screening across all G.I. malignancies. This decline was most significant in CRC.

\* Perkons NR, Kim C, Boedec C, Keele LJ, Schneider C, Teitelbaum UR, Ben-Josef E, Gabriel PE, Plastaras JP, Shulman LN, Wojcieszynski AP. Quantifying the impact of the COVID-19 pandemic on gastrointestinal cancer care delivery. *Cancer Rep (Hoboken)*. 2022 Jan;5(1):e1427. doi: 10.1002/cnr2.1427.

# Study Objectives

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- To investigate the impact of COVID-19 infection on colorectal cancer screening with colonoscopy during COVID-19 pandemic compared to pre-COVID-19 era.
- To assess the difference in time to treatment initiation for cases with a confirmed diagnosis of colorectal adenocarcinoma during COVID-19 pandemic compared to pre-COVID-19 era.

# Study Design

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- We conducted a retrospective cohort study.
- We included all patients who underwent screening colonoscopy at Baptist Hospitals of Southeast Texas between April 2019 and March 2021.
- Patients were stratified into pre-COVID-19 (April 2019-March 2020) group and COVID-19 (April 2020-March 2021) group.
- Patients with a diagnosis of colorectal adenocarcinoma have been confirmed with the data from our cancer center to check if they were able to continue cancer staging work up and start their treatment.
- Time to treatment initiation was defined as the time between receiving a diagnosis of CRC documented by pathology report and the date of first cycle of chemotherapy or the date of surgical resection.
- Analysis was conducted using descriptive statistics and multivariate regression analysis to explore the correlation between patient's demographics, insurance status and study outcomes.

# Selection Criteria

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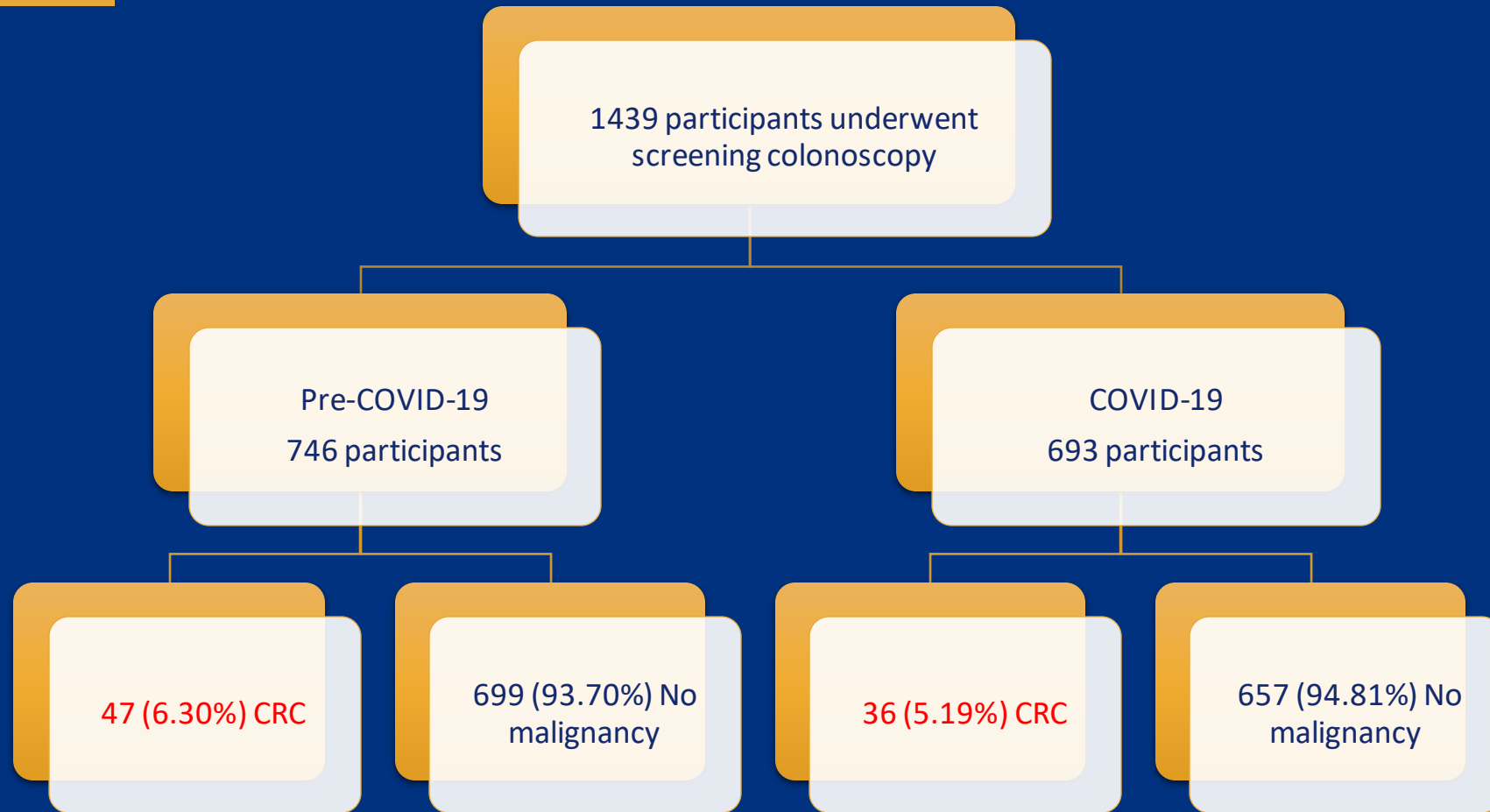
## Inclusion Criteria

- Patients age between 50-75 years old.
- Screening colonoscopy for the first time.
- CD-10: Z12.11 (encounter for screening for malignant neoplasm of colon).
- Between April 2019 and March 2021.

## Exclusion Criteria

- Previous history of colorectal adenocarcinoma.
- Patients whose clinical data or colonoscopy results were not available.

# Study Results





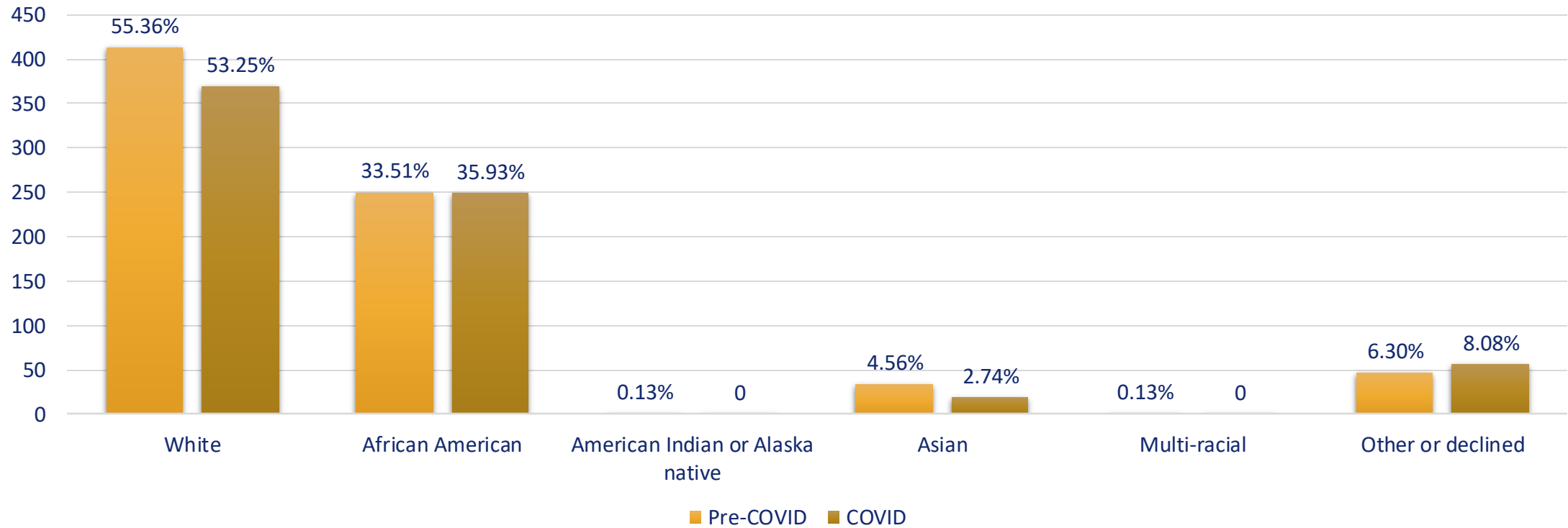
# Study Results

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|                           | Pre-COVID-19 | COVID-19     | P - value |
|---------------------------|--------------|--------------|-----------|
| <b>Number of patients</b> | 746          | 693          | 0.1624    |
| <b>Age (Mean) ± SD</b>    | 59.88 ±7.4   | 60.42 ±7.22  | 0.4247    |
| <b>Gender</b>             |              |              | 0.1106    |
| Male                      | 364 (48.8%)  | 309 (44.6%)  |           |
| Female                    | 382 (51.2%)  | 384 (55.4%)  |           |
| <b>Insurance</b>          |              |              | 0.2766    |
| Insured                   | 743 (99.60%) | 687 (99.13%) |           |
| Self-pay                  | 3 (0.40%)    | 6 (0.87%)    |           |

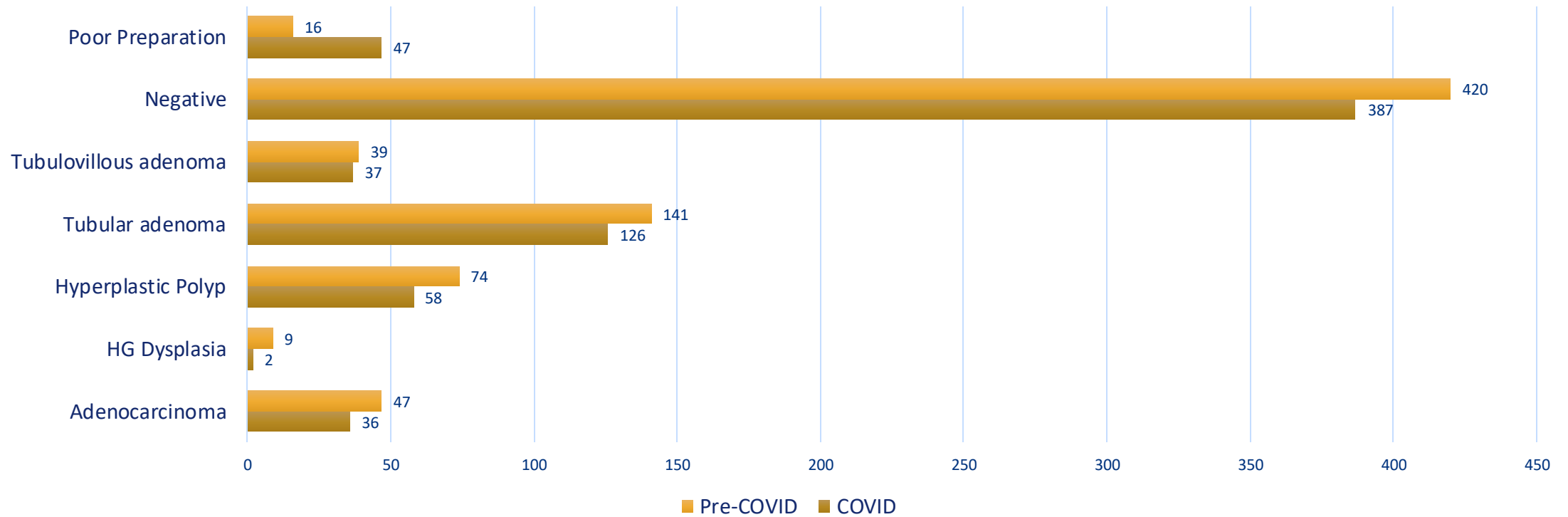
# Study Results

Population Distribution by Ethnicity  
*P*-value 0.83



# Study Results

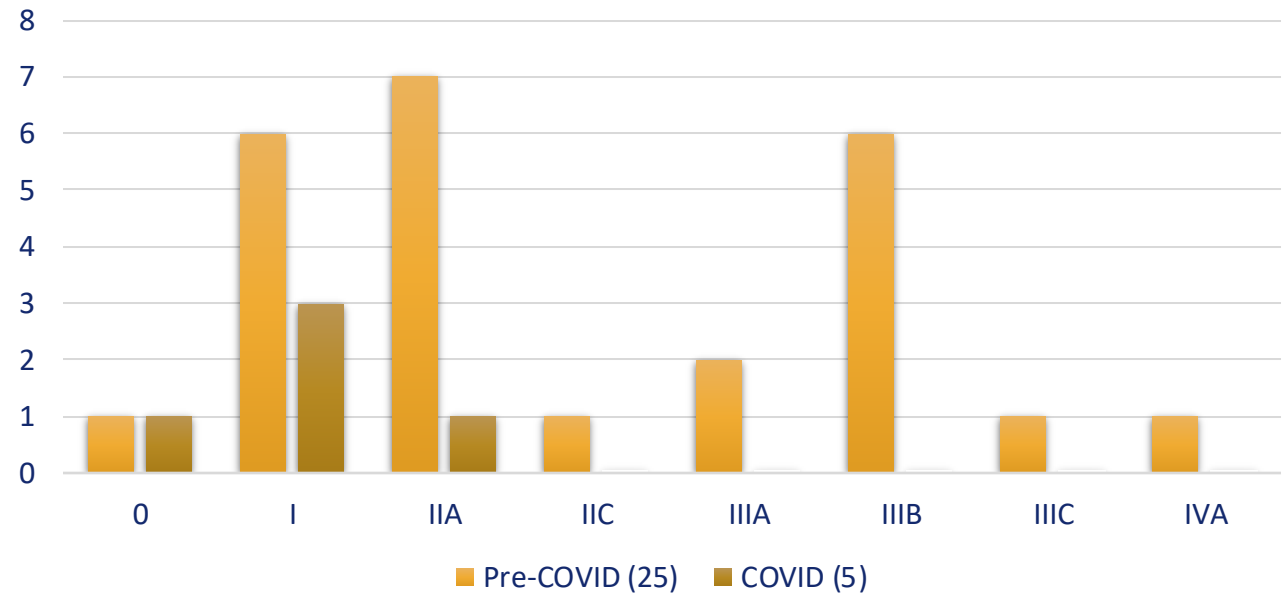
## Endoscopy Findings *P*-value 0.136



# Study Results “Confirmed CRC Cases”

- 47 cases (6.3%) in the pre-COVID-19, and 36 case (5.19%) in the COVID-19 groups received confirmed CRC diagnosis.
- 53% of patients with confirmed CRC in pre-COVID-19 group pursued cancer staging workup and treatment. However, only 14% of patients with confirmed CRC in COVID-19 group pursued cancer staging workup and treatment.

**Cancer Staging for confirmed CRC Cases**



# Study Results “Confirmed CRC Cases”

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|   | Pre-COVID (25)    | COVID (5)          | P-value |
|---|-------------------|--------------------|---------|
| <b>Time to Treatment Initiation (Days ± SD)</b> | Mean = 33.80 ± 46 | Mean= 21.4 ± 13.28 | 0.025   |
| <b>Initial Treatment</b>                        |                   |                    |         |
| Surgical resection                              | 21 (84.00%)       | 5 (100.00%)        |         |
| Neoadjuvant Chemoradiation                      | 3 (12.00%)        | 0                  |         |
| Palliative Chemotherapy                         | 1 (4.00%)         | 0                  |         |

# Conclusion

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- In our hospital, the COVID-19 pandemic didn't appear to affect the accessibility to colorectal cancer screening or delay the staging workup and treatment. However, only a limited number of patients with confirmed colorectal adenocarcinoma during the COVID-19 pandemic were able to continue cancer staging workup and receive treatment.

# Thank You!

