

# When you can't follow the rulebook - Outcomes in a real-world population of stage III colon cancer patients.

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## Background

Stage III colon cancer treated with oncologic resection alone has a cure rate of 50%.<sup>1</sup> The addition of adjuvant chemotherapy improves this cure rate to 70%. Despite the well-established role of adjuvant chemotherapy for this stage of cancer to improve survival, it is well known that a significant proportion do not receive adjuvant chemotherapy.

## Aim

This project aims to explore a cohort of stage III colon cancers to characterise the patients that do not receive adjuvant chemotherapy following resection of their cancer and to describe the survival outcomes in these patients.

## Method

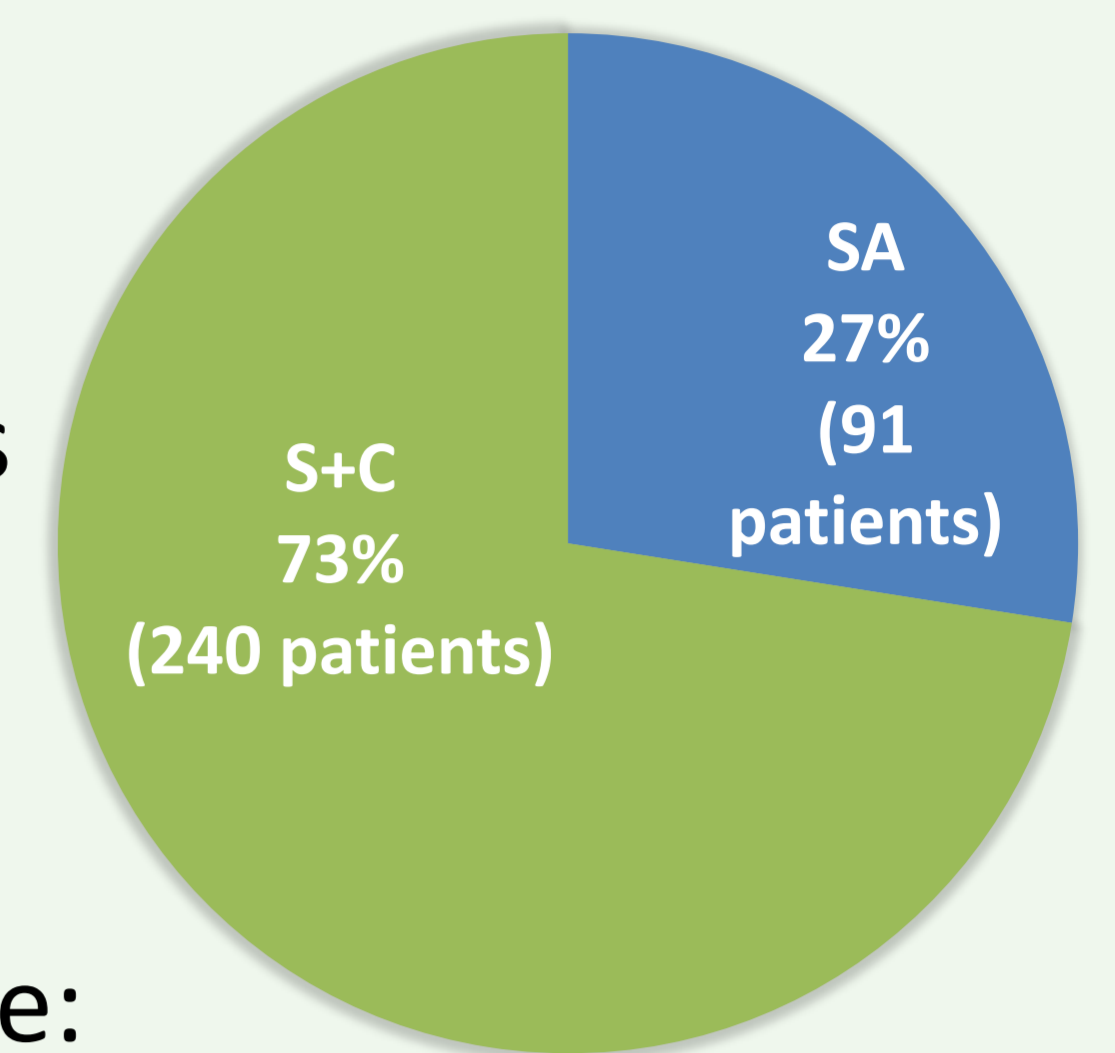
The Cabrini Monash Colorectal Neoplasia Database was interrogated for patients with stage III colon cancer treated at Cabrini to compare contemporary patient and tumour characteristics and outcomes in those undergoing surgery alone (SA) versus surgery and adjuvant chemotherapy (S+C).

## References

1. Taieb J, *et al.* Refining adjuvant therapy for non-metastatic colon cancer, new standards and perspectives. *Cancer treatment reviews.* 2019;75:1-11.
2. Stintzing S *et al.* Understanding the role of primary tumour localisation in colorectal cancer treatment and outcomes. *European journal of cancer (Oxford, England : 1990).* 2017;84:69-80.

## Results

- Between 2007-2019 there were:
  - 331 stage III colon cancer patients
    - 91 (27%) SA
    - 240 (73%) S+C
- Compared to S+C patients, SA patients were:
  - Older (median age 85 years in SA vs 66 years in S+C)
  - More likely to be female (66% vs 46%)
  - Had higher American Society of Anesthesiology (ASA) scores
- SA patients more often had:
  - Right-sided primary tumours (73% SA vs 52% S+C,  $p < 0.001$ )
  - Mucinous tumours (26% vs 11%,  $p = 0.002$ )
  - These are historically associated with poorer outcomes<sup>2</sup>
- There was no difference between SA and S+C in terms of:
  - Emergency surgery rates (3% SA vs 2% S+C,  $p = 0.40$ )
  - Surgical complication rates (19% vs 18%,  $p = 0.87$ )
- SA patients experienced:
  - More medical complications (23% SA vs 7% S+C,  $p < 0.001$ )
  - Worse relapse-free survival (median 49 months for SA vs not reached for S+C,  $p < 0.001$ )
  - Worse cancer-specific relapse-free survival (median 68 months vs not reached,  $p = 0.003$ )
  - Worse overall survival (median 67 vs 112 months,  $p < 0.001$ )
  - Worse cancer-specific overall survival (median 74 vs 112 months,  $p < 0.001$ )



## Conclusion

- Age, medical co-morbidity and post-operative medical complications combine to preclude a significant proportion of patients with stage III colon cancer from adjuvant chemotherapy
- SA patients more often have poorer prognosis tumours
- SA patients have worse cancer-specific survival, highlighting the poorer oncologic outcomes these patients experience without chemotherapy even in the setting of competing co-morbidities
- Future research in this population should include assessment of BRAF mutation status