# Neuropsychology of Saudi colon cancer patients
# CPC-092

## Norah Abanmy[1], Paul Gard[2], Angela Macadam[2], Ola Alomran[1].

[1]King Saud University, Clinical pharmacy, Riyadh, Saudi Arabia.
[2]University of Brighton, Pharmacology and therapeutics, Brighton, United Kingdom.

## Background

Colorectal cancer is a common disease and its prevalence is second to that of breast cancer worldwide. In Saudi Arabia the disease is ranked second after breast cancer and accounts for 8.5% of all tumors. Evaluation of Quality of life (QOL), anxiety and depression of such patients, as well as neurocognitive properties, is important to assess the impact of both malignancy and/or exposure to treatments including chemotherapy and surgery.

## Purpose

To assess the neuropsychology of a group of Saudi colon cancer patients 6 months after treatment was completed.
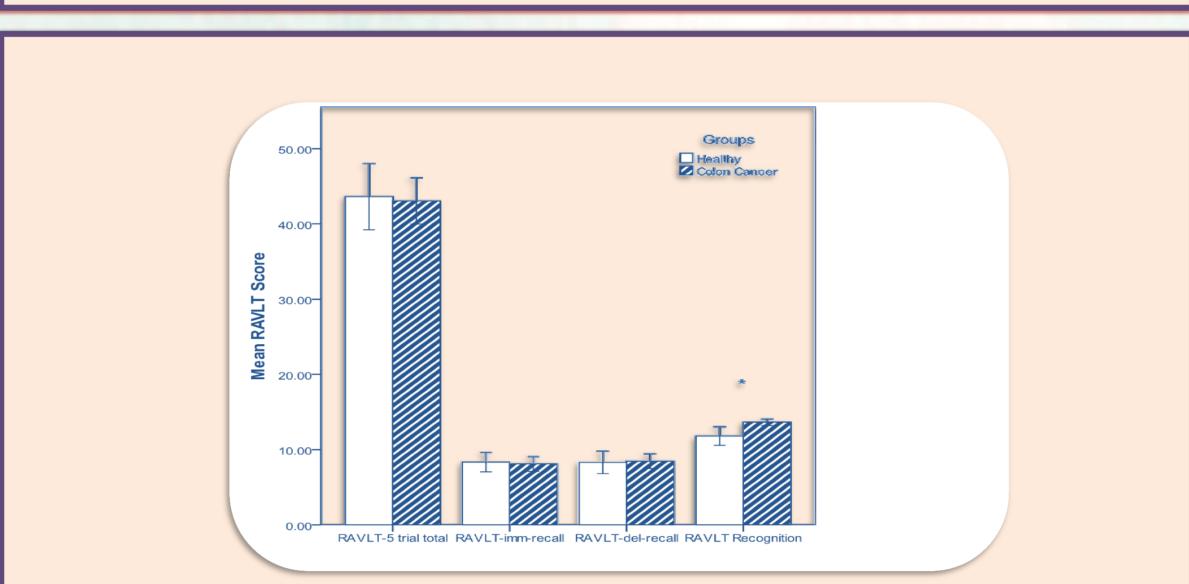
## Materials and Methods

❖ Patients (18- 60 yr) were recruited from the oncology clinic at King Khaled University Hospital (KKUH) at Riyadh, the capital city of Saudi Arabia.
❖ Exclusion criteria included smoking, psychiatric or cerebrovascular disease, sensory impairment, abnormal electrolytes, anaemia or uncontrolled blood pressure. Healthy volunteers were randomly recruited from the same hospital, however the availability of matched age controls was difficult.
❖ Cognition was assessed using :
❖  Rey Auditory-Verbal Test RAVLT (learning & memory)
❖  Rey-Osterrieth complex figure (RCF, visuo-spatial organization and visuo-spatial memory)
❖ Semantic verbal fluency (executive function);
❖ Letter cancellation (attention)
❖ Digit-symbol (sustained attention, visual searching, visual sequencing).
❖ The Arabic version of 36-item Short-Form Health Survey SF-36 to assess QOL
❖ The Hospital Anxiety and Depression Scale (HADS) used to assess anxiety, and depression.
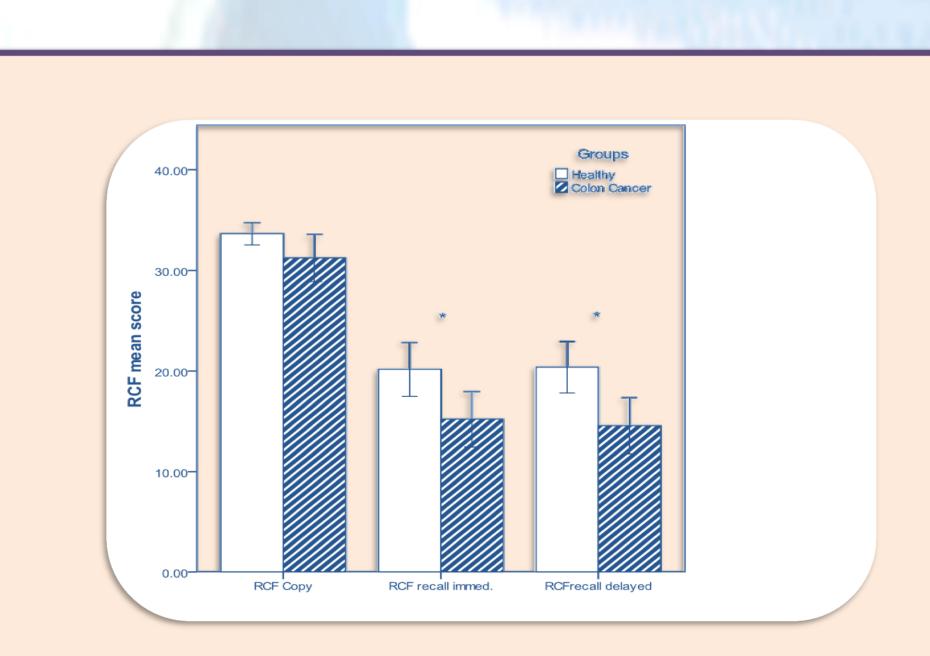
## Conclusion

This study indicates that colon cancer, nor its treatment, has any significant impact on the psychological well-being of the patients in comparison to healthy controls. The significant differences in recall may reflect the differences in age between the groups.

## Results



Mean ± 95% CI of RAVLT scores (trial 1 to 5 (RAVLT1-5), immediate (RAVLT imm), and delayed (RAVLT del) recall, as well as recognition task (RAVLT recog) in healthy volunteers (n=36) and colon cancer patients in remission (n=32). * represents significant difference from control group (p<.05).



Mean ± 95% CI of RCF scores of copy, immediate and delayed recall tasks in healthy volunteers (n=36) and colon cancer patients in remission (n=32). * represents significant difference from control group (p<.05).

| Task | Result summary |
|---|---|
| QOL SF-36 (total) | No Sig differences. |
| PCS | No Sig differences. |
| MCS | Sig differences between groups (p < 0.01), with colon cancer patients performing better. |
| HAD-Anxiety | Sig differences between groups (p < 0.01), with colon cancer patients having less anxiety. |
| HAD-Depression | Sig differences between groups (p < 0.01), with colon cancer patients having less depression. |
| DSST | No Sig differences. |
| Letter cancellation | No Sig differences. |
| Mental fluency | No Sig differences. |