



# Oncology Screening in Post-Renal Transplant Patients: A retrospective review of adherence to screening guidelines in a Canadian health region

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## OBJECTIVE

- Evaluate the completeness of age-appropriate tests recommended to assess for possible cancer in transplant recipients care for by the Fraser Health Post Transplant Program, specifically reviewing recommended tests for colon, cervical, breast, and prostate cancer
- Identify any gaps in malignancy screening in this population that may inform change

## INTRODUCTION

- Organ transplant is associated with an increased risk of malignancy as a result of immunosuppressive medications
- Prior reviews found at least triple the rate in the general population
- Patients diagnosed with cancer post-transplant have reduced survival, and treatment options may be limited by their kidney disease, medications, or comorbidities
- Malignancy diagnosis may necessitate modification of anti-rejection medications and affect graft survival
- Screening to detect cancer early is critical
- The responsibility for cancer screening is center/region dependent and may include primary care providers versus the transplant team
- In BC, Canada, cancer screening is the responsibility of the primary care practitioner

## METHODS

**Study population:** All adult post kidney transplant recipients, age 19-74, currently under the care of the Fraser Health Post Kidney Transplant Clinic as of May 8, 2021.

**Data:** Retrospective chart review using electronic medical records (Meditech, CareConnect, and BC Cancer Agency). Data collection went back retrospectively from May 8, 2021 until date of first kidney transplant. This study received approval by the Fraser Health Research Ethics Board.

### Variables collected

- Completion of recommended oncology screening: Breast (mammogram), Cervical (PAP), Prostate (PSA), Colorectal (FIT)
- Who ordered the test (Primary Care Practitioner versus transplant team)

Complete screening was defined based on British Columbia Canada guidelines

- PAP smear every 3 years for females sexually active or age 25-69 and older
- Mammogram every 2 years for all females 50-74 years old
- FIT test every 2 years for individuals age 50-74 with no family history of colon cancer
- PSA annually for males age 50 and older

Incomplete screening defined as screening with lower frequency than recommended guidelines since transplant

## RESULTS

- N = 702 adult kidney transplant recipients being followed as of May 8, 2021
- Mean age = 59 years old (range 22 – 87); 35% female & 65% male

Figure 1. Completeness of PAP females age 25-69

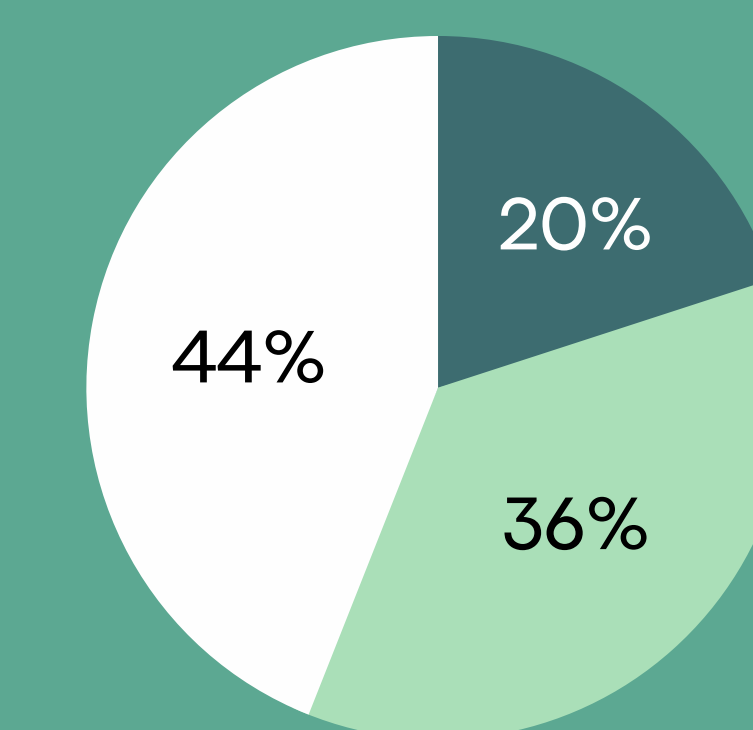


Figure 2. Completeness of mammogram age 50-74

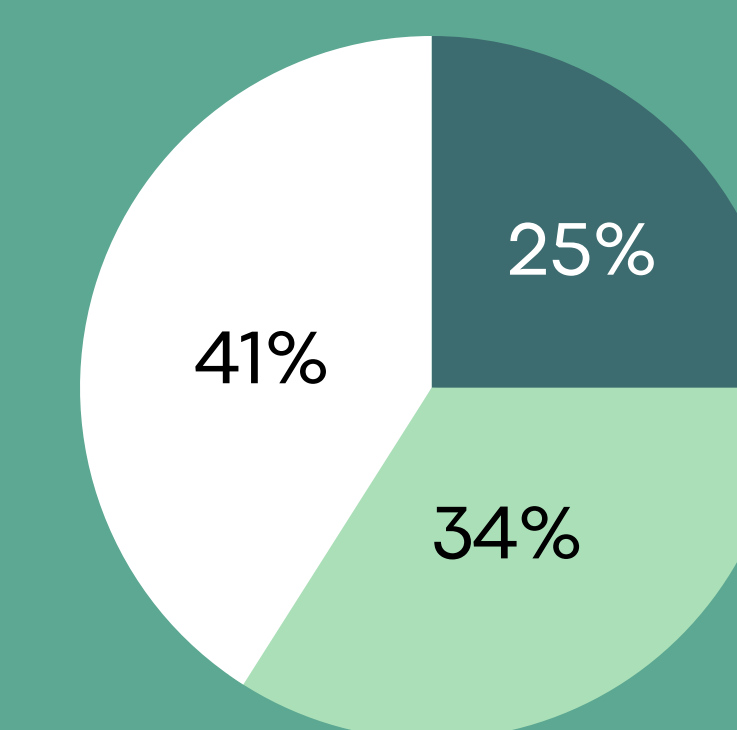


Figure 3. Completeness of PSA males age > 50

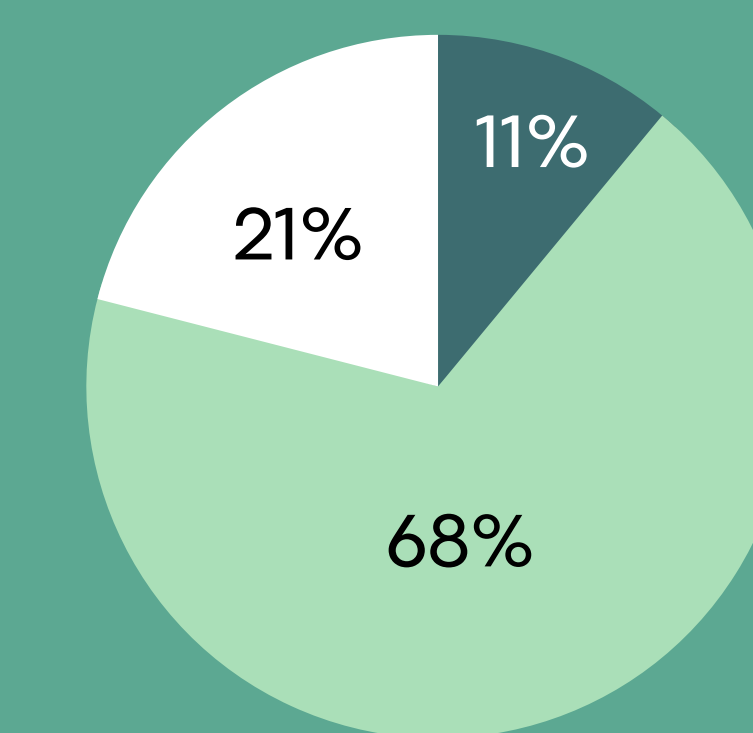
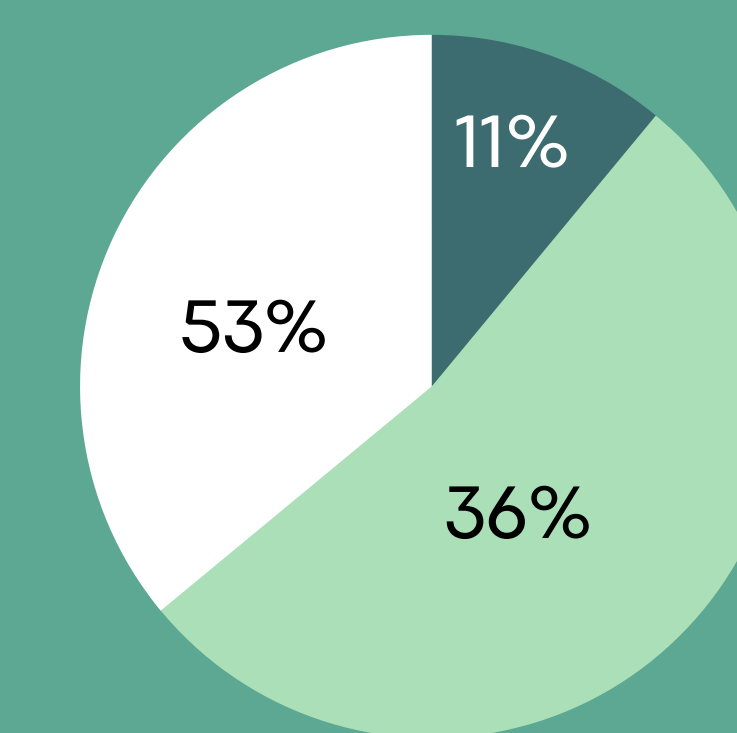
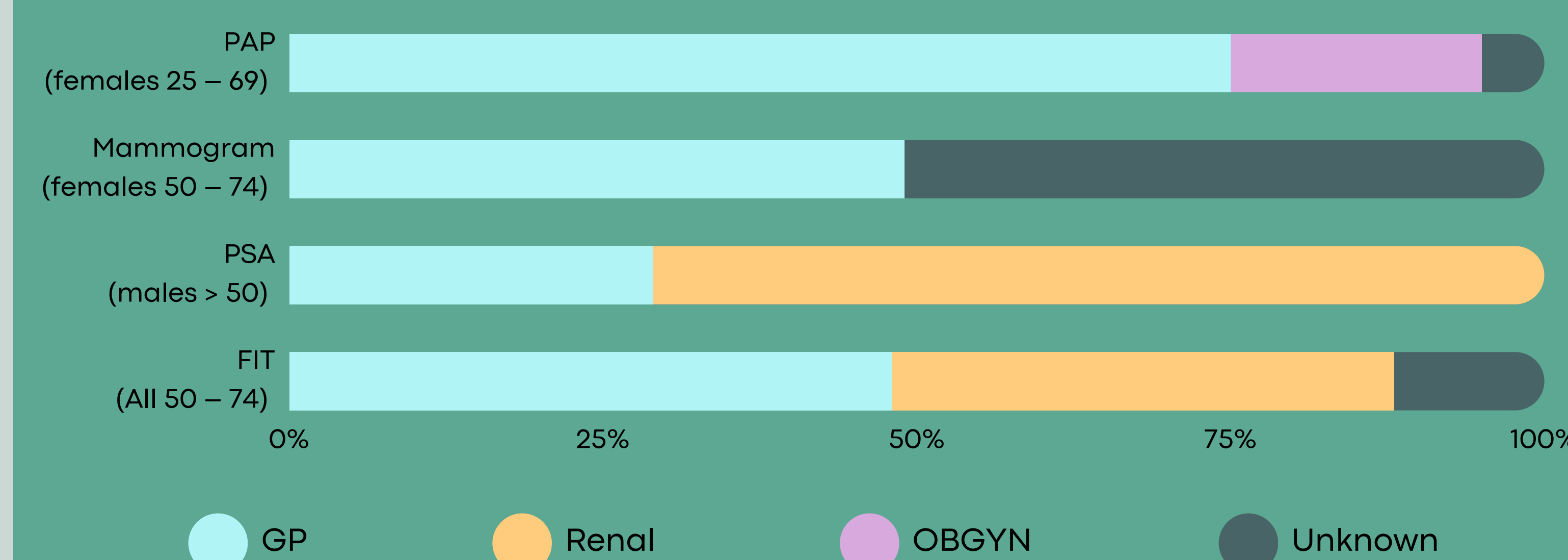


Figure 4. Completeness of FIT age 50-74



Complete Partial None

Figure 5. Screening Tests Ordered By Specialties



## DISCUSSION

- High proportion of incomplete or absent cancer screening
- This is a current gap in care for a high risk transplant population
- Possible explanations for poor adherence to cancer screening guidelines may include:
  - BC Cancer Agency data shows similarly low rates in general population for PAP and Mammogram
  - Low comfort in managing the post transplant population amongst primary care practitioners
  - High unattachment to family practitioner
  - Family practitioner may sometimes be unclear whose responsibility it is to arrange cancer screening

### Recommendations

- A larger province-wide study
  - Determine reasons why screening incomplete
  - Identify barriers
- Creation of a patient handout re: post Tx oncology risks/screening, or update the current BC Transplant handout Health Guide for Patients after Transplantation
- Add cancer as cause of death to current BC Transplant statistics
- Implementing a checklist system for post transplant clinics where due/overdue oncology screening is flagged and patients can be advised to complete
- Education for GP's re: necessity of post Tx oncology screening

## CONCLUSION

Solid organ transplant patients are at increased risk for malignancy and our study shows cancer screening is incomplete in our sample of transplant patients. There is much room for improvement. Further investigations will be needed to determine reasons why screenings are incomplete and to identify barriers to these important cancer screenings.

## REFERENCES

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