
Using Administrative Data to Describe the Organization and Quality of Colon cancer Follow-up Care in Manitoba

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Who are we?

A CIHR “Access to Quality
Cancer Care” Project
*The CIHR/CCMB Team in Primary
Care Oncology (PCO-NET)*



CIHR/CancerCare Manitoba
Team in Primary Care
Oncology Research

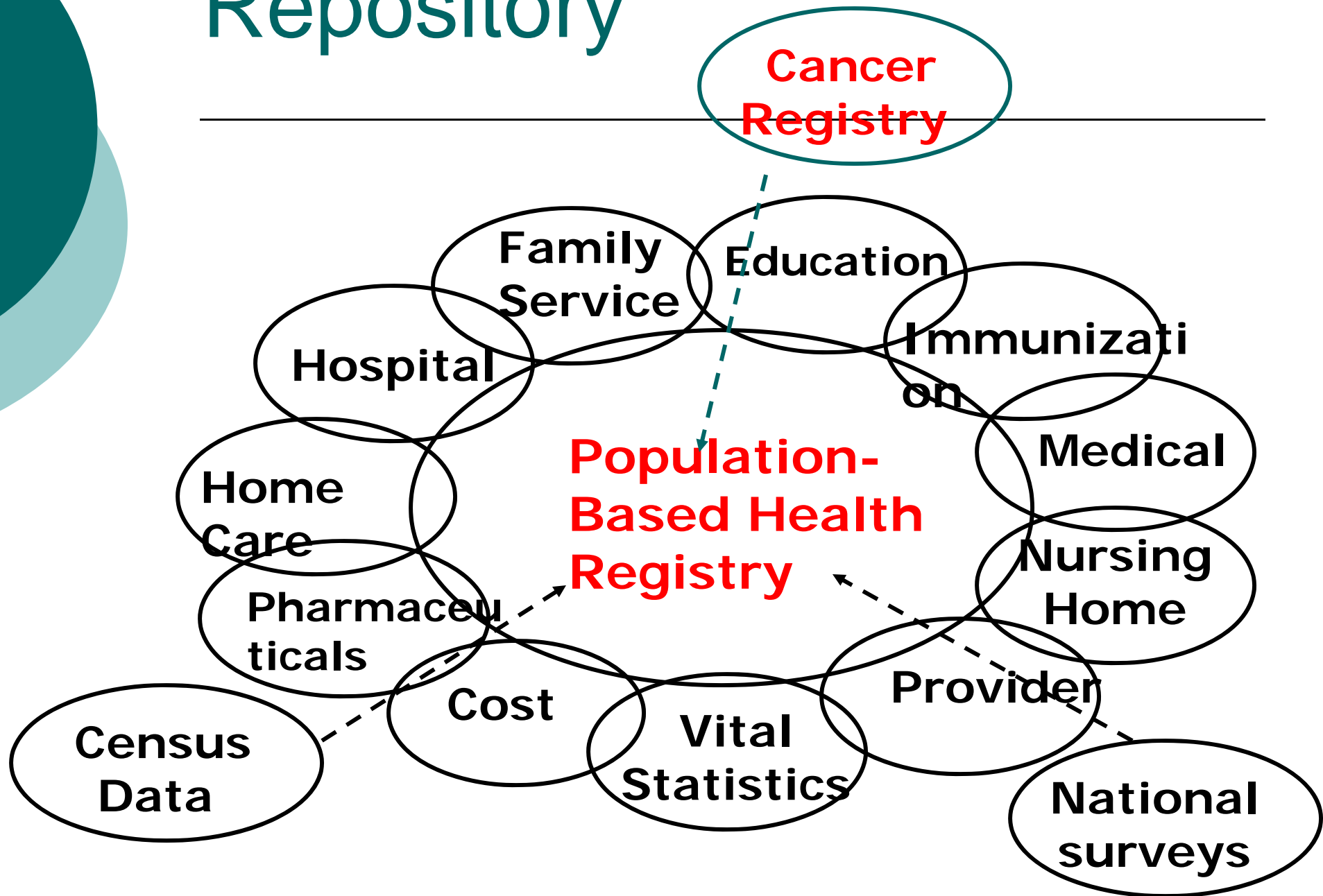




Research Questions for today

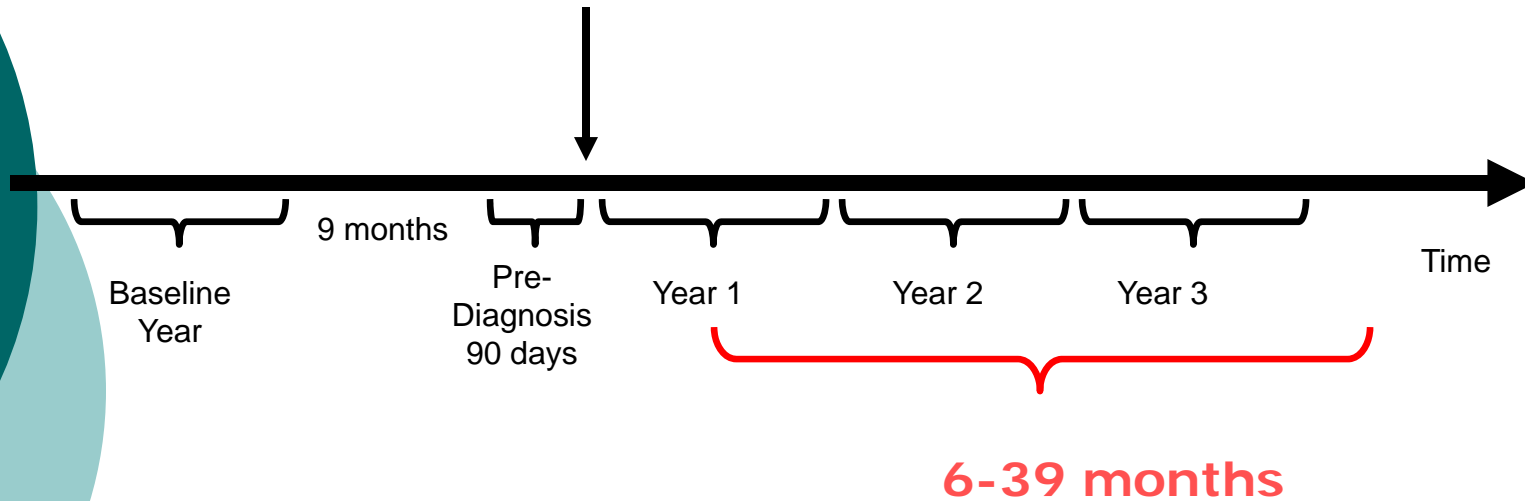
- To what extent are patients receiving recommended follow-up tests?
- How is follow-up care organized between FPs, surgeons and specialists?

Repository



Time Frames

Diagnosis Date
Calendar Year 2004



The cohort: Stage II or III CRC diagnosed in 2004

- **Baseline:** 1 year; starts 2 years before date of dx
- **Pre-Diagnosis:** 90 days preceding date of dx
- **Year 1** mainly a treatment year, starts date of diagnosis
- **Year 2 and 3** mainly surveillance care

Stage II or III Colon Cancer Diagnosed in 2004

Including

- Adenocarcinoma histologies
- First diagnosis of CRC
- Previous other cancer allowed

Excluding

- No surgery performed
- Died within 6 months of diagnosis

Analyze those Alive at 39 months

- Cohort: 238 at diagnosis
 177 alive at end of 39 months
- When cancer returns, most patients can't be cured and drop off follow-up protocols (recurrence info is being collected through a chart review.)
- 3-year survivors are the "best case group" to analyze

CancerCare Manitoba

5-year Surveillance Recommendation

Stage II & III Colon Cancer

FOLLOW-UP RECOMMENDATIONS

Follow-up Year 1 is the 12-month period beginning on the date of the patient's surgery.

Follow Up	Year 1, 2, 3	Year 4, 5
Physician Visits* <i>Complete History & Physical including Rectal Exam</i>	Every 3 months	Every 6 months
Bloodwork* <i>Carcinoembryonic antigen (CEA)*</i>	Every 3 months	Not routine
CT Imaging* <i>Chest/Abdomen</i>	Annually	Not routine
Chest X-Ray*	Not routine	Not routine
Colonoscopy*	End of Year 1, then every 3 – 5 years indefinitely (if no polyps)	
Monitoring* <i>Long-term Toxicities of Chemotherapy</i>	No specific monitoring required	



Follow-up Maneuvers

1. Physician visits

2. Colonoscopy

3. Liver imaging

- CT scan abdomen, MRI scan abdomen, Ultrasound abdomen, Nuclear liver spleen scan

4. CEA test

1. Physician Visits

MD Type		Baseline	Pre-Diagnosis	Year 1	Year 2	Year 3
FP/GP	Average times per Person	6.45	3.15	9.09	7.48	6.97
	percent of times	87.34%	67.16%	48.37%	54.95%	56.87%
Oncologist	Average times per Person	3.5	2	5.61	3.35	4.17
	percent of times	0.62%	0.54%	24.61%	14.51%	16.80%
Surgeon	Average times per Person	1.22	1.27	3.18	2.46	2.2
	percent of times	0.97%	15.55%	15.31%	13.46%	10.34%
Internist	Average times per Person	1.24	1.67	3.46	4.08	4.84
	percent of times	2.29%	9.65%	5.20%	6.89%	7.29%
Other	Average times per Person	1.92	1.56	2.63	3.38	2.71
	percent of times	8.80%	7.10%	6.51%	10.18%	8.69%



2. Colonoscopy

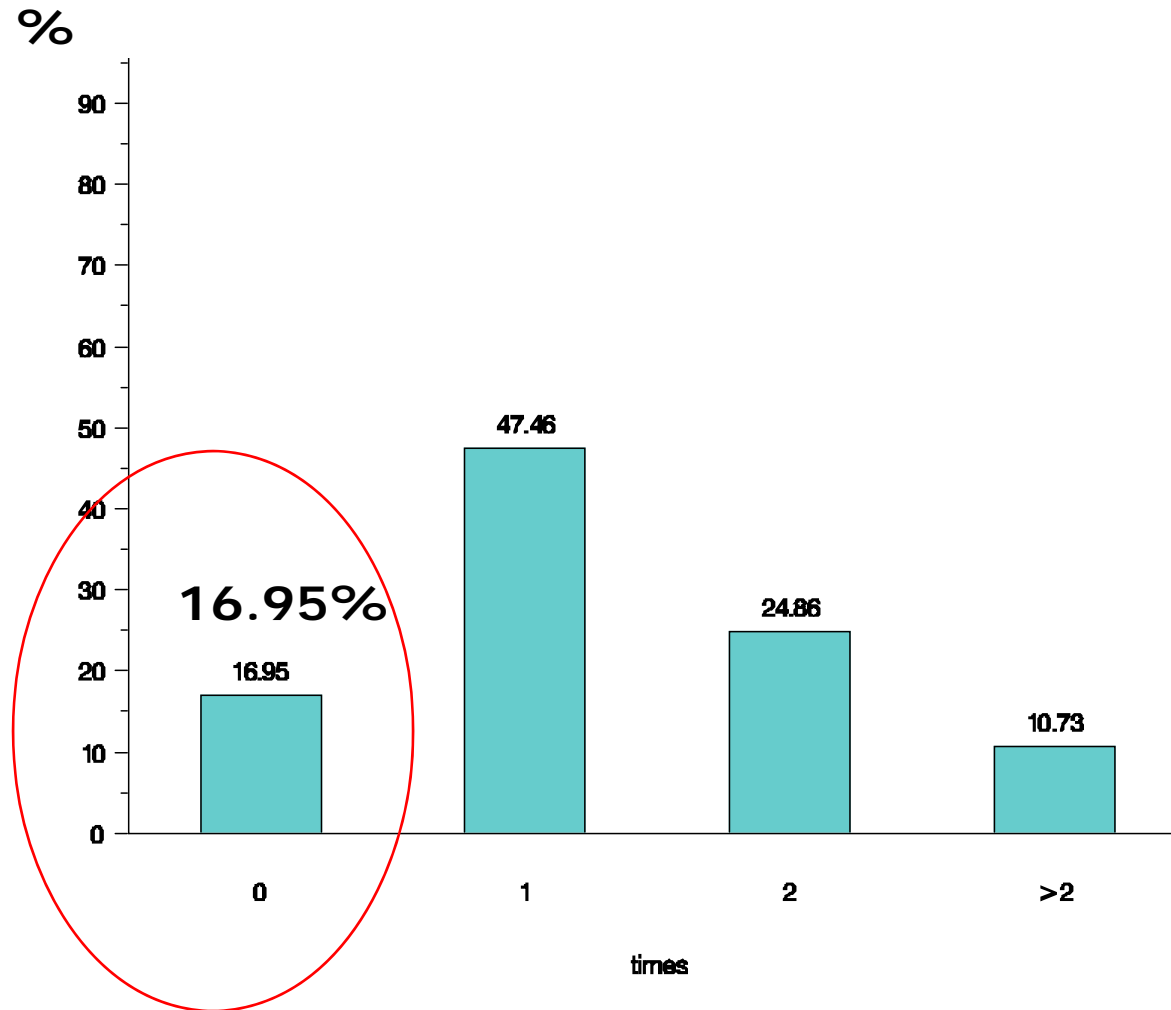
- One scope in the first three years is the minimum

2. Colonoscopy

Proportion of Individuals with Colonoscopy

First Colon Cancer Dx 2004 Stage II/III and alive at 39 months

Time Period 6—39 Months post diagnosis

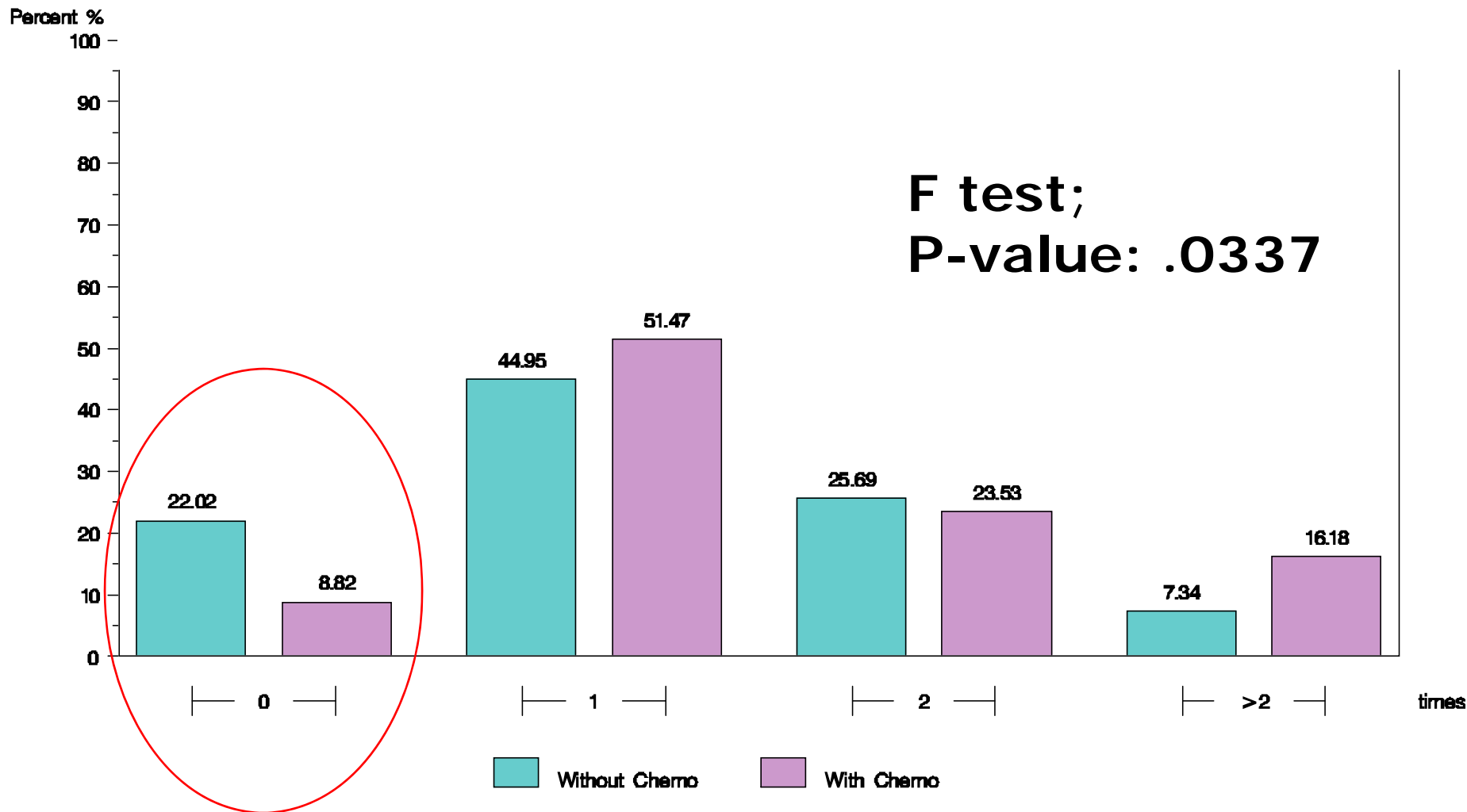


2. Colonoscopy: chemo vs. no-chemo

Proportion of Individuals with Colonoscopy

First Colon Cancer Dx 2004 Stage II/III and alive at 39 months

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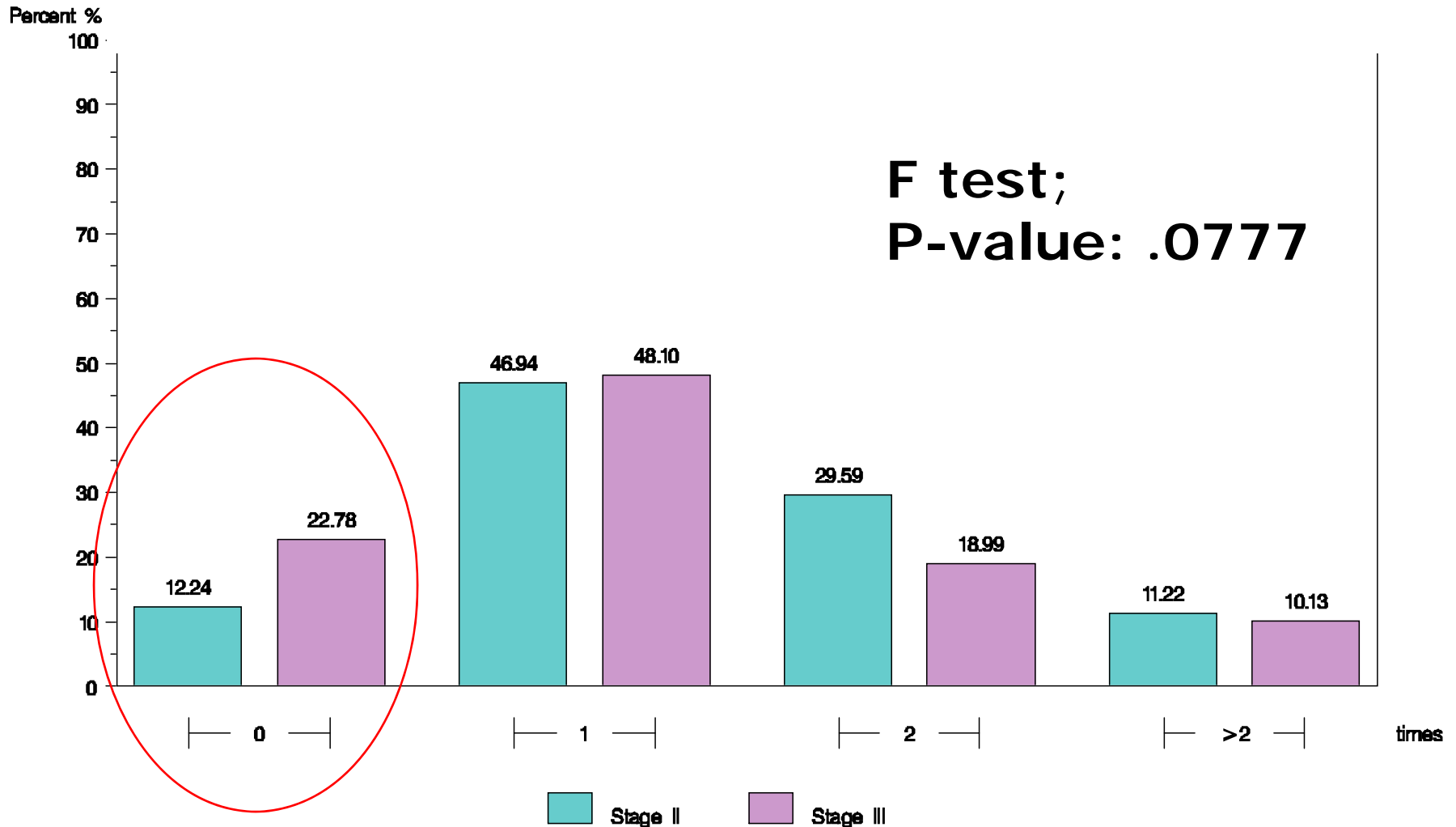


2. Colonoscopy: stage II vs. stage III

Proportion of Individuals with Colonoscopy

First Colon Cancer Dx 2004 Stage II/III and alive at 39 months

Time Period 6—39 Months post diagnosis



3. Liver Imaging

- One scan annually for 3 years
- Standard: 3 scans
- 89% of our scans are CTs

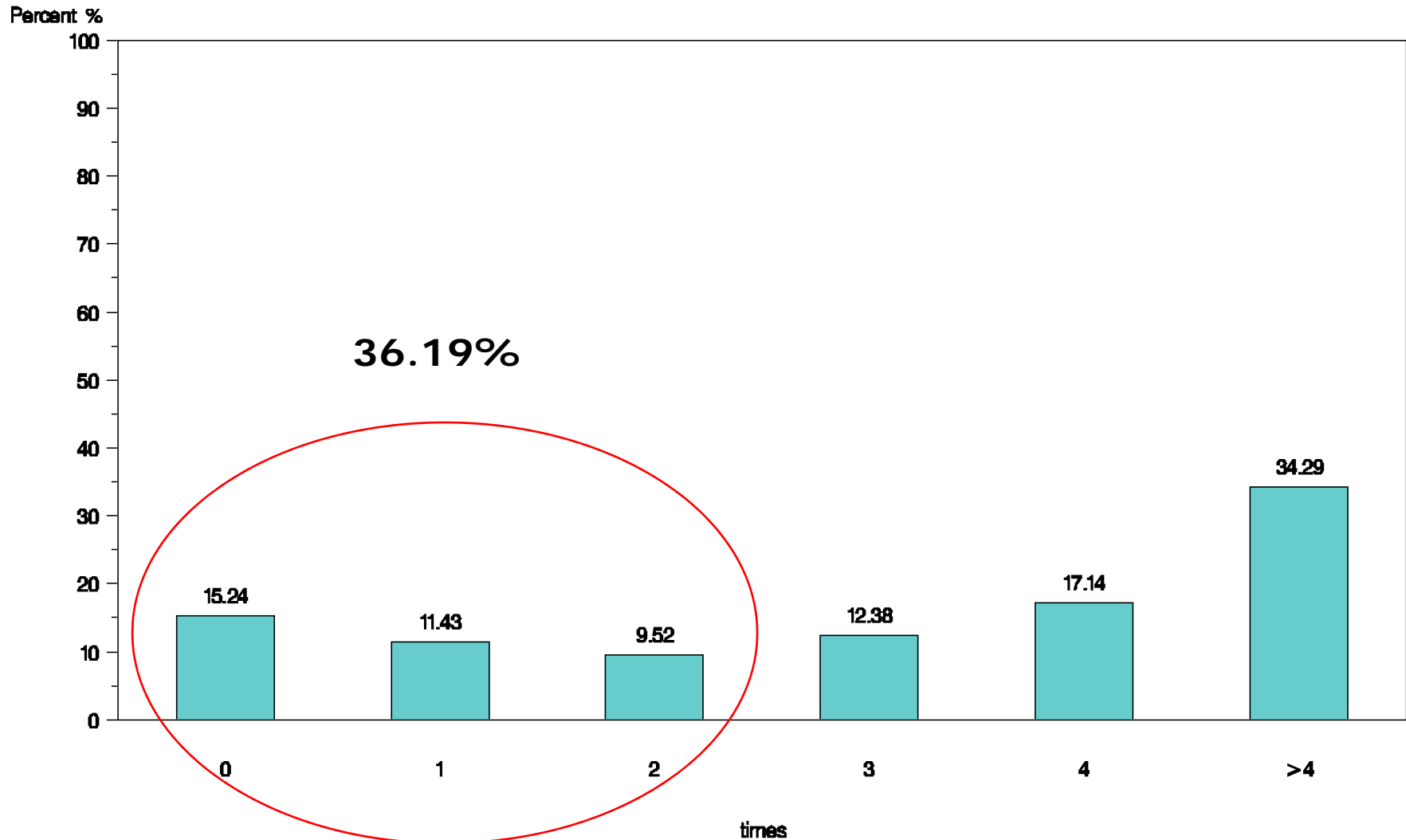
- BUT there are data problems with diagnostic imaging outside of Winnipeg (→ we report Winnipeg case only today)

3. Liver imaging

Proportion of Individuals with Liver Imaging (Winnipeg only)

First Colon Cancer Dx 2004 Stage II/III and alive at 39 months

Time Period 6—39 Months post diagnosis

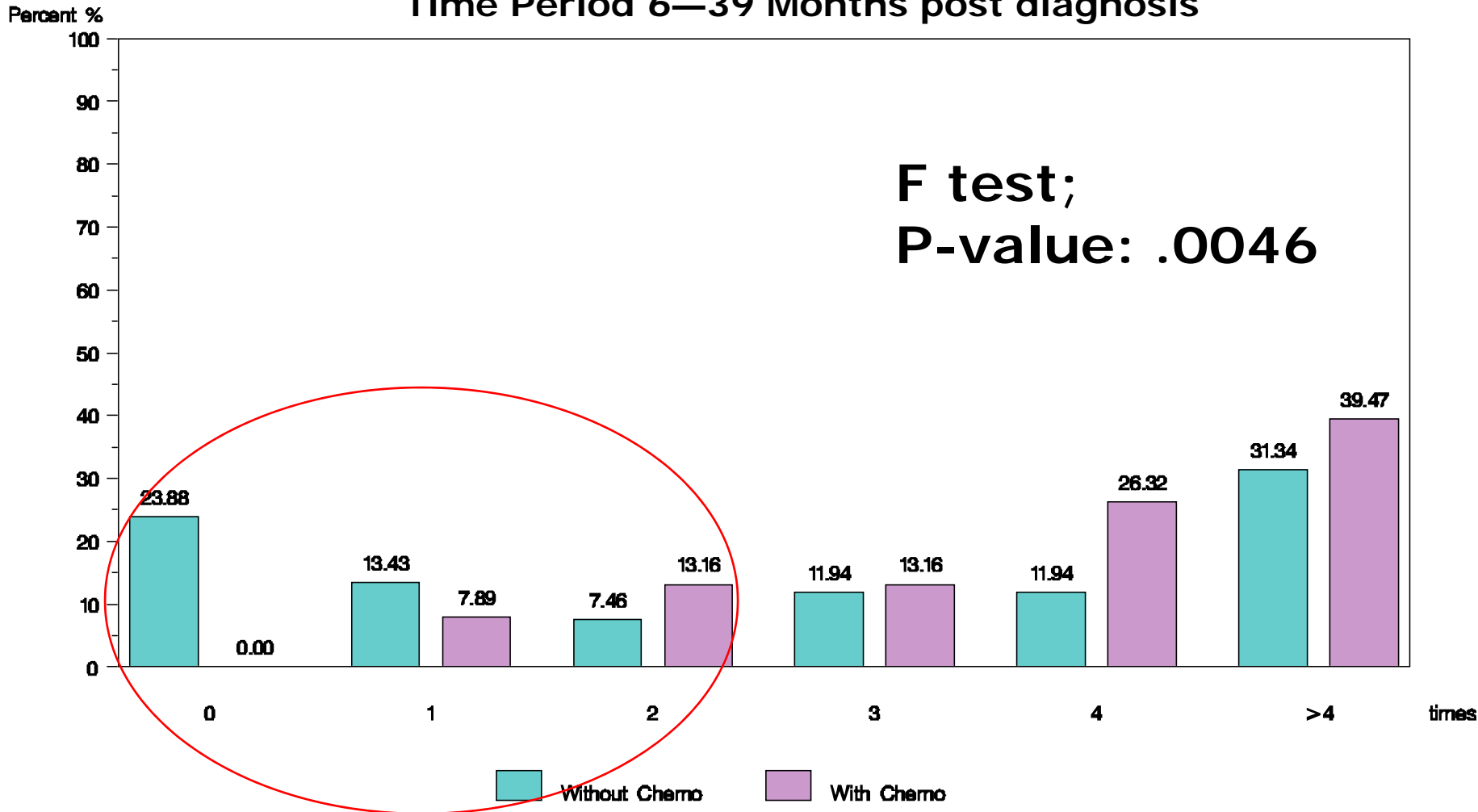


3. Liver imaging: chemo vs. no-chemo

Proportion of Individuals with Liver Imaging (Winnipeg only)

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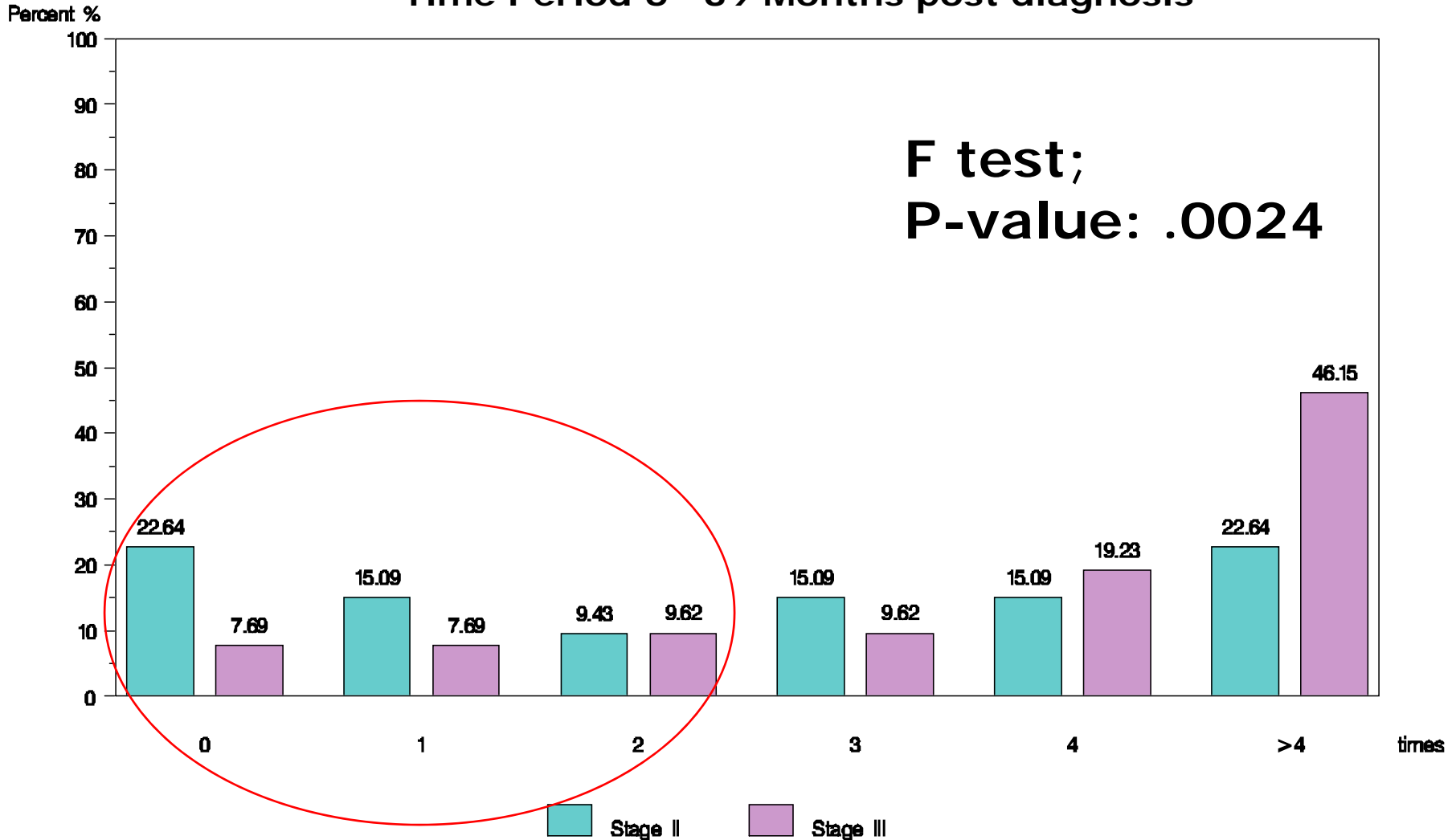


3. Liver imaging: stage II vs. stage III

Proportion of Individuals with Liver Imaging (Winnipeg only)

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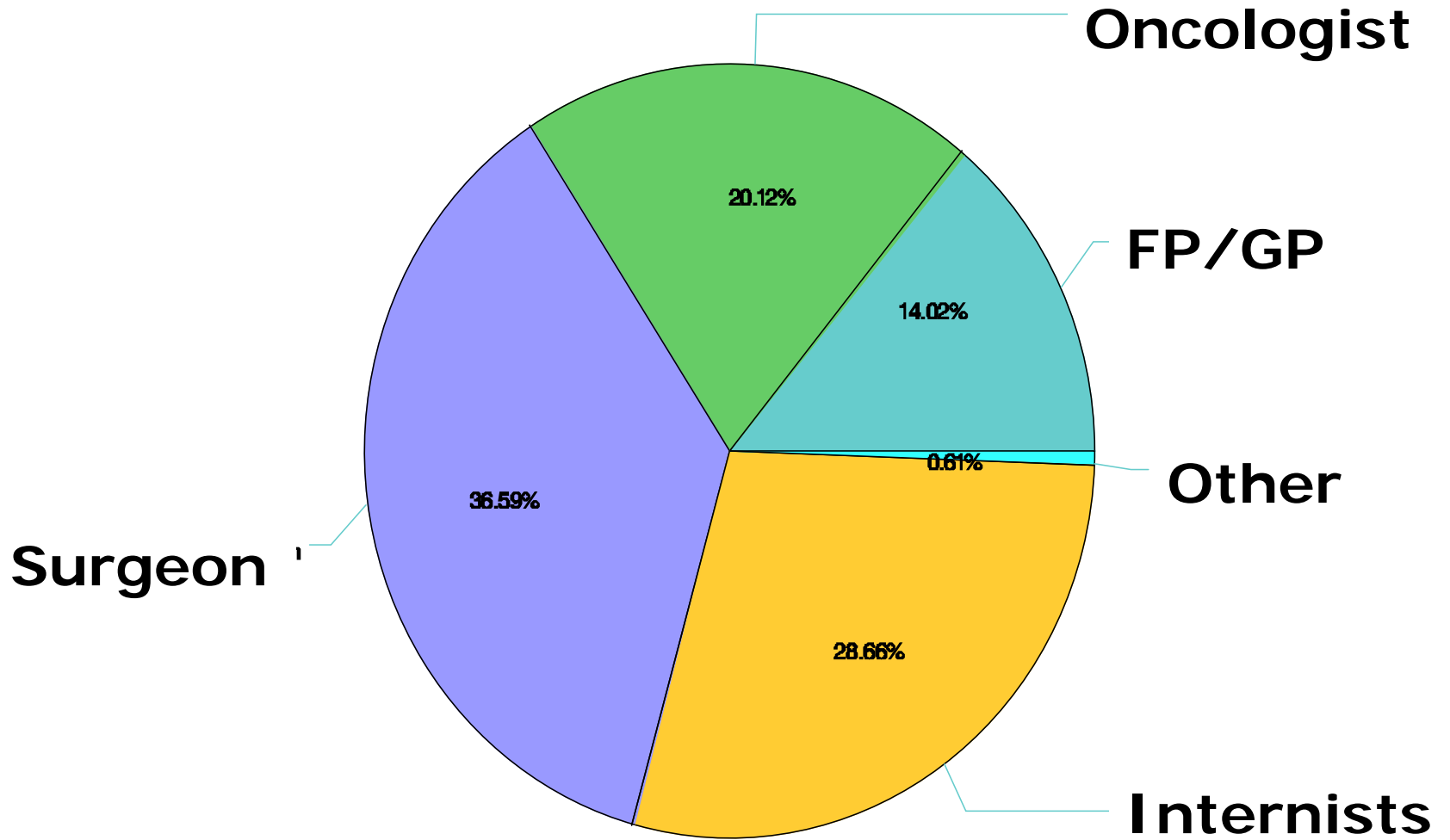


3.1. Ordering Liver Imaging

- The type of physician ordering liver imaging may suggest the organization of follow-up care
- Some ways of organizing needed follow-up may be better than others

Liver Imaging by Ordering Physician Bloc

First Colon Cancer diagnosed in 2004
Stage II/III and alive at 39 months – Winnipeg
Year 1



Liver Imaging by Ordering Physician Bloc

First Colon Cancer diagnosed in 2004
Stage II/III and alive at 39 months – Winnipeg
Year 2

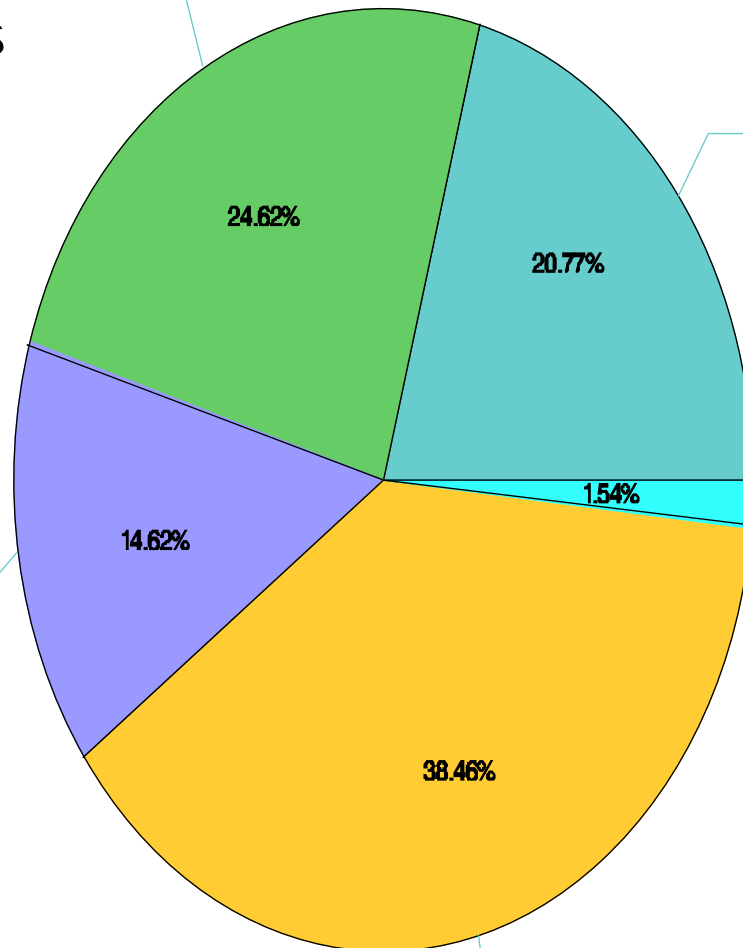
Oncologists

FP/GP

Other

Surgeon

Internists



Liver Imaging by Ordering Physician Bloc

First Colon Cancer diagnosed in 2004

Stage II/III and alive at 39 months – Winnipeg

Year 3

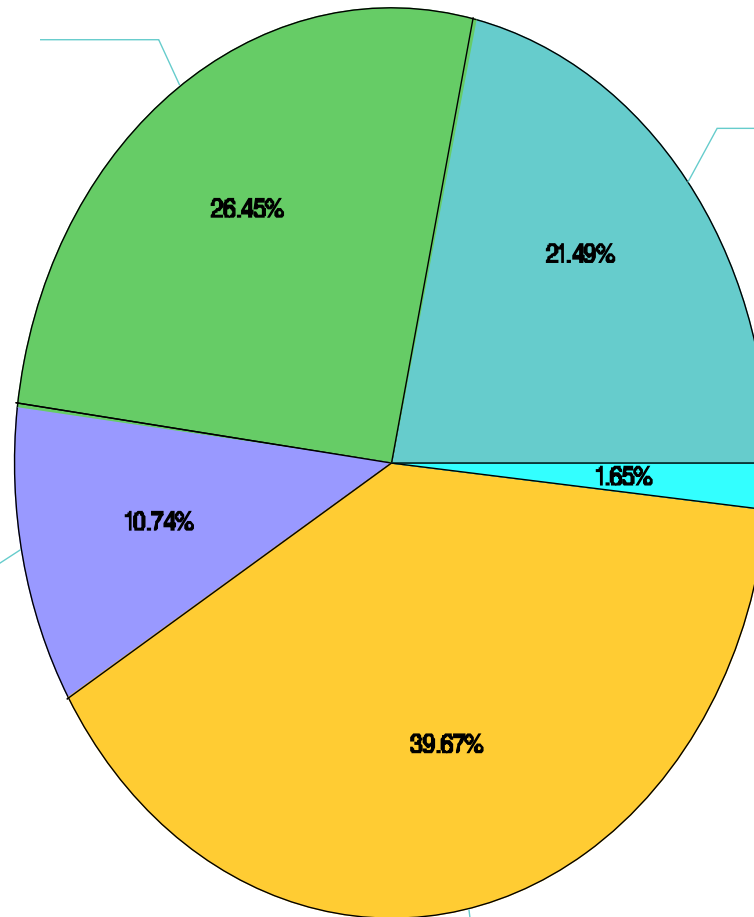
Oncologists

FP/GP

Other

Surgeon

Internists





Conclusion

- Colon cancer patients have frequent contact with FPs at all points
- Provision of follow-up colonoscopy and liver imaging falls below guidelines for patients not receiving chemotherapy
- About 15 -20% of liver imaging tests are ordered by FPs



A challenge: Most Responsible Physicians

- Can we define a Most Responsible Physicians (MRP) for follow-up care from administrative data?
- Is this a predictor for levels of adherence to follow-up testing?



Next steps

- CEA test results...we are about to analyze the data
- Predictors of quality of follow-up care
 - Treatment received
 - Patient factors
 - Physician factors
 - SES
 - Co-morbidity
 - Geography