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Is Increased Access To
Radiology Reports
Beneficial?

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Queen's Summer Research
Internship Final Presentation

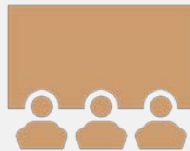
August 13th, 2021

Background



In April of 2021, the information blocking rule of the Cures Act established that electronic health records (EHR) are immediately accessible to patients on a health portal.

Access to records are easier, unrestricted, and without delay.



Purpose of study: To find how accurate patients' interpretations of radiology reports are and analyze their knowledge of language used in reports when navigating a radiology report without a physician.



What is a traditional radiology report?

"The traditional written radiology report is the primary method by which radiologists communicate diagnostic imaging findings to referring physicians and patients," (Andrew Gunn, 2015).

Objectives

To measure how well patients interpret radiology reports.

To measure how comfortable and familiar patients are with medical terminology in radiology reports



Methods

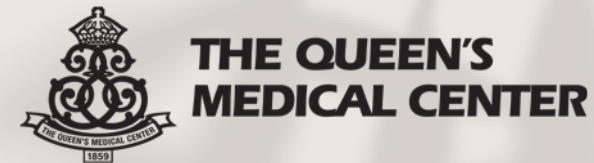
- 85 patients/caregivers recruited at Queen's Cancer Center Medical Oncology Group
- 15-20 minute Google Form survey
- Two versions of the survey
 - One group with a traditional radiology report
 - One group with layman's terms
- Measures to evaluate understanding of report include questions such as:
 - "The radiology report suggests there are new growths"
 - "I feel the language in this report was easy to read and understand"
 - "I am not familiar with the medical terms used in this report."



Demographics

	Traditional Report n(%)	Layman's Terms n(%)
Gender		
M	16 (37)	19 (46)
F	27 (63)	22 (54)
Age*		
30 or younger	0 (0)	3 (7)
30-44	2 (5)	0 (0)
45-64	20 (45)	6 (15)
65-79	18 (41)	25 (61)
80 or older	4 (9)	7 (17)
Educational Level		
Did not graduate from high school	5 (12)	6 (17)
Some college/ college graduate	29 (69)	26 (72)
Post-graduate training	8 (19)	4 (11)

Demographics

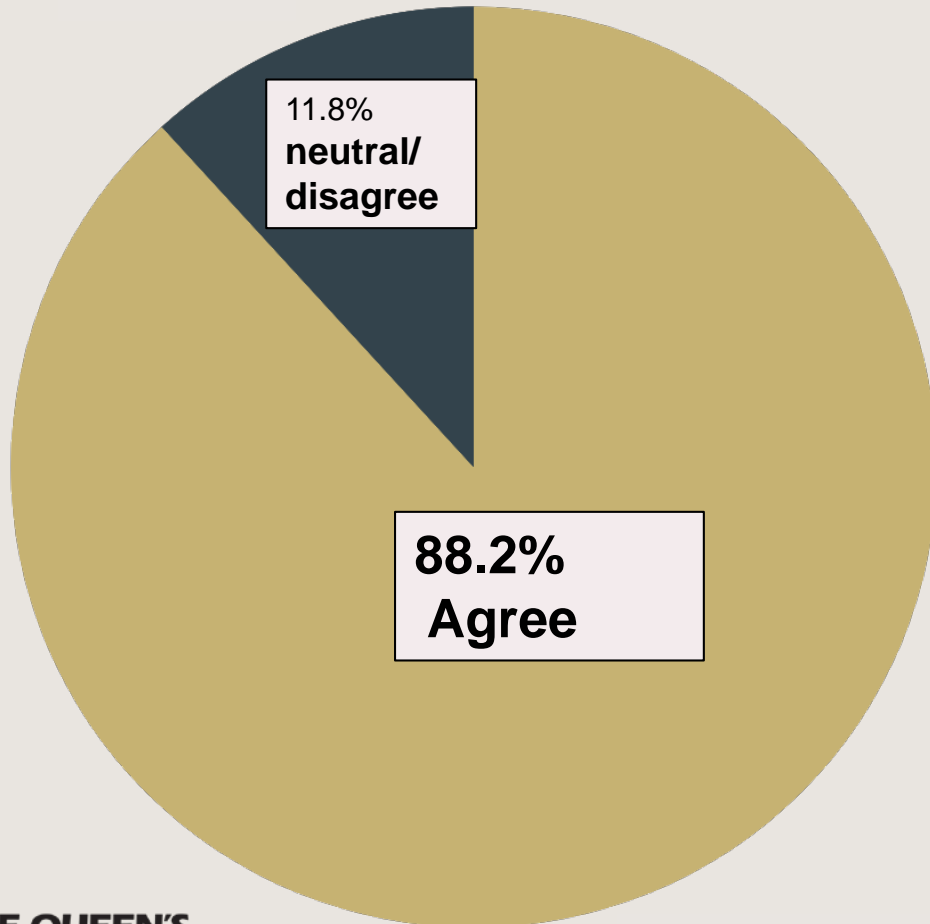


	Traditional Report n(%)	Layman's Terms n(%)
Time from cancer diagnosis		
Less than 1 year	8 (22)	10 (34)
1-2 years ago	14 (38)	3 (10)
3-5 years ago	6 (16)	9 (31)
More than 5 years ago	9 (24)	7 (24)
Annual Income		
<\$30,000	7 (19)	8 (27)
\$30,000-59,000	6 (16)	5 (17)
\$60,000-89,000	11 (30)	5 (17)
>\$90,000	13 (35)	12 (39)
Employment Status		
Retired	27 (64)	22 (54)
Disabled	3 (7)	3 (7)
Working Full-time/Part-time	12 (29)	16 (39)

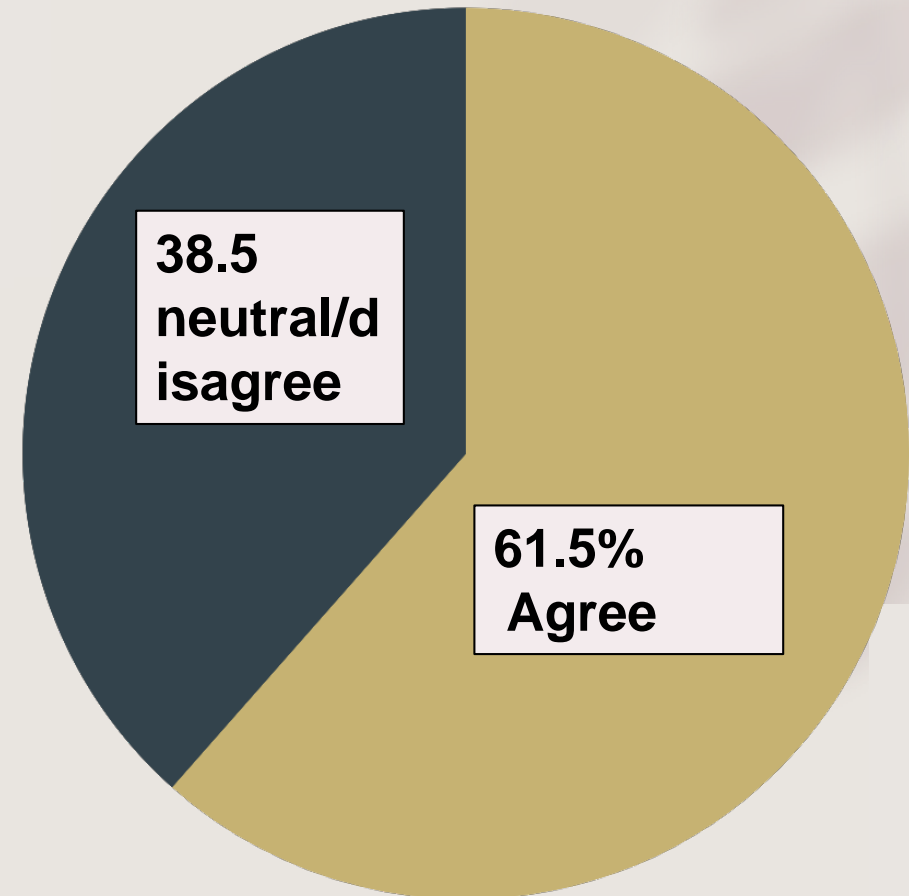
"The Report Showed New Growths"

P-value= .014; HR 4.7 (95% CI 1.4-16)

Layman's terms



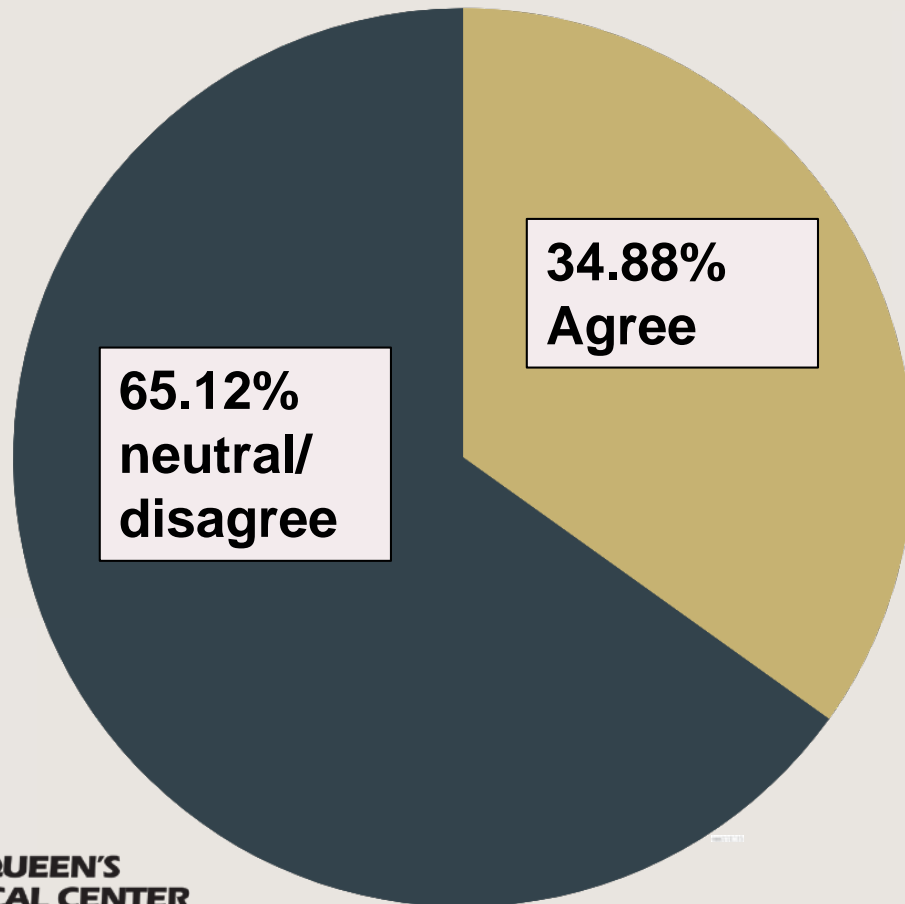
Traditional Radiology Report



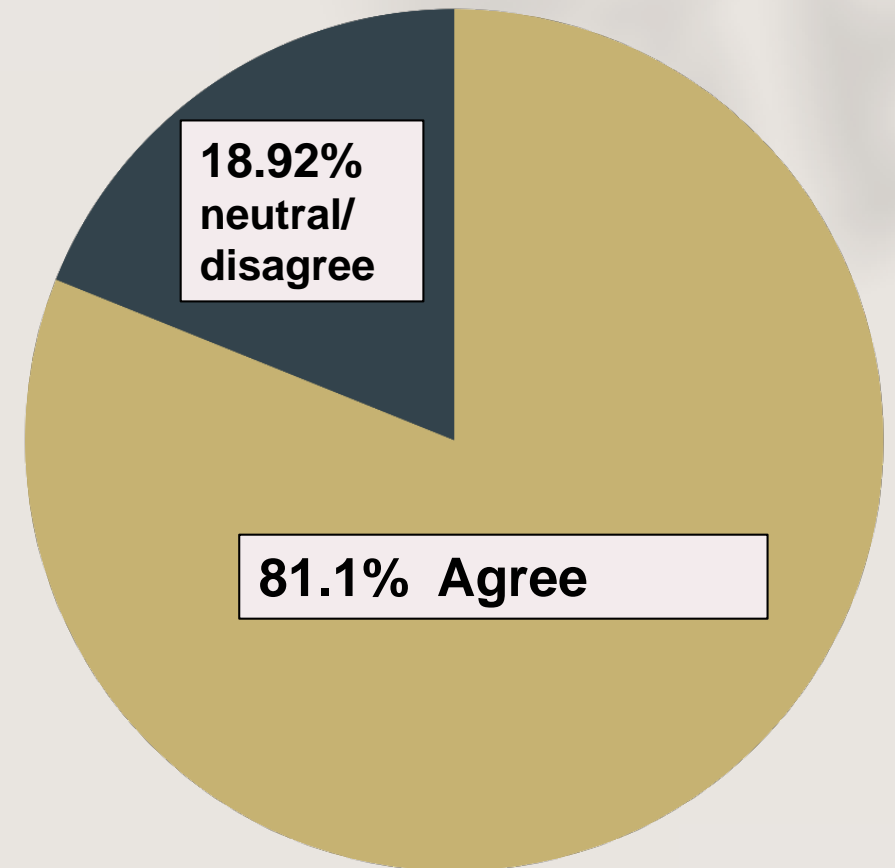
"The Language Was Easy to Read and Understand"

P-value < 0.005; HR 8.857 (95% CI 3.127- 25.091)

Traditional Report



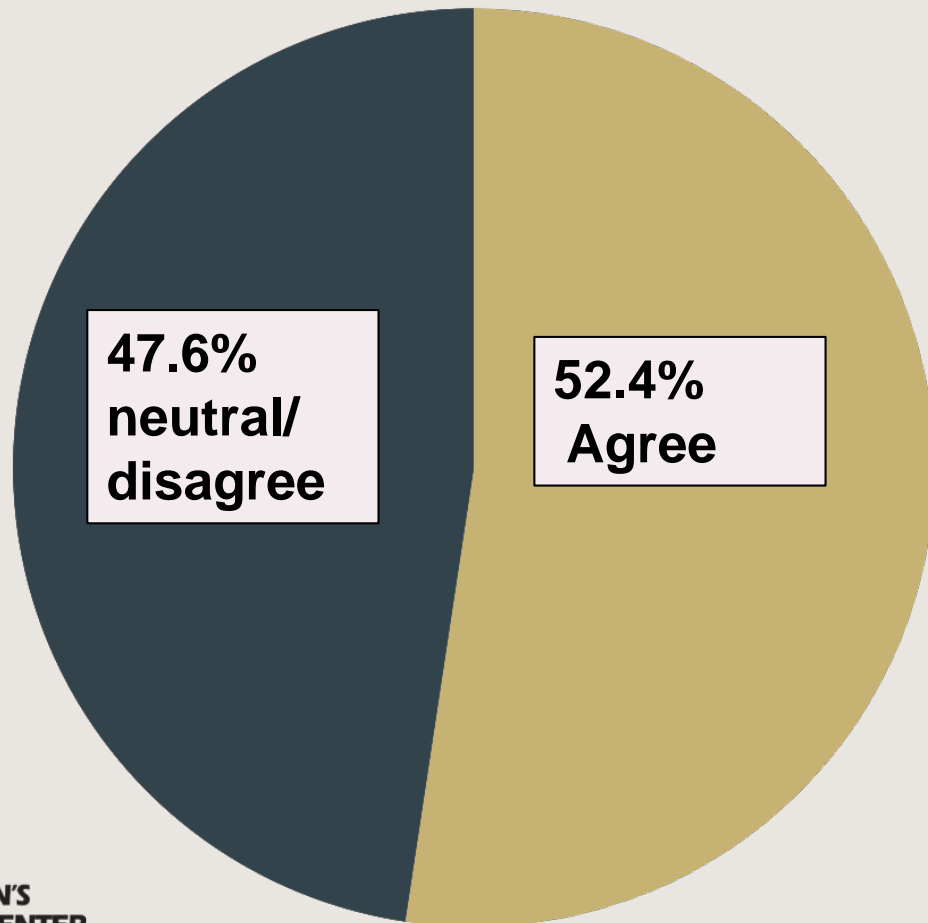
Layman's Terms



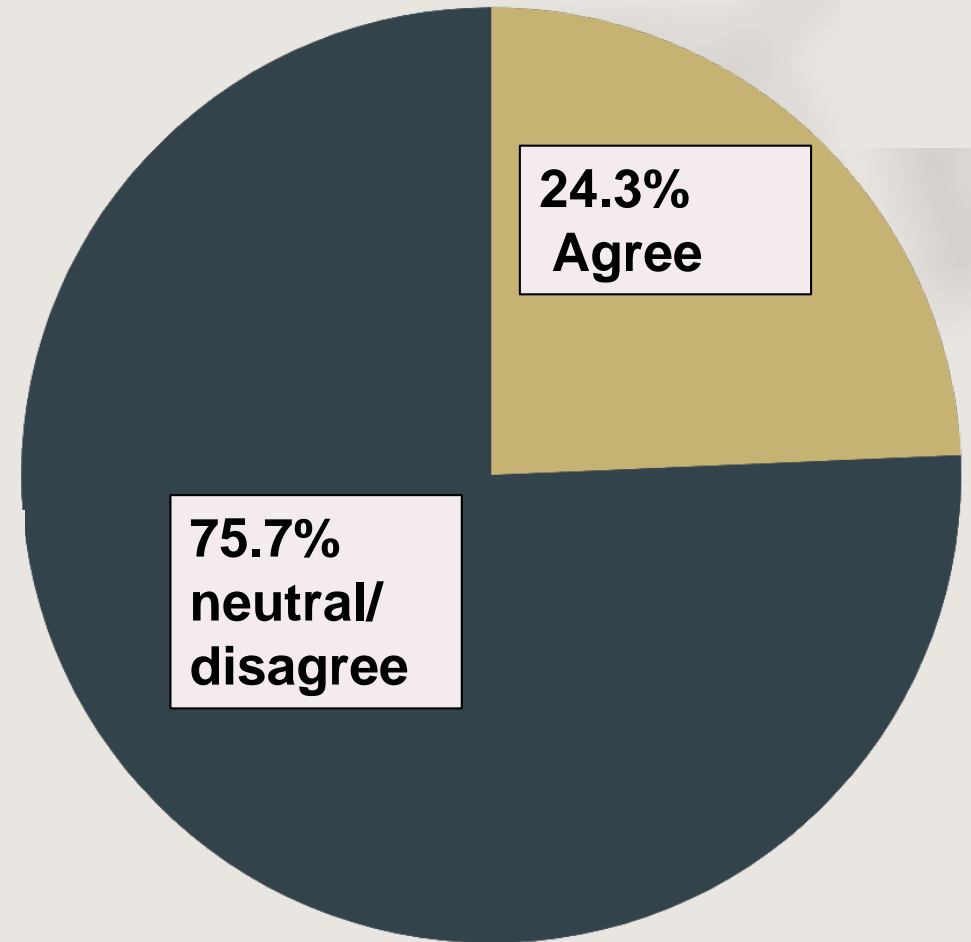
"I Am Not Familiar With The Medical Terms Used In The Report"

P-value = 0.012; HR .292 (95% CI = 0.111 - 0.767)

Traditional Report



Layman's Terms



Non-Significant

- The understanding of the report had non-significant impacts from:
 - Age
 - Education level
 - Annual income
 - Time from cancer diagnosis
 - Confidence in using the internet

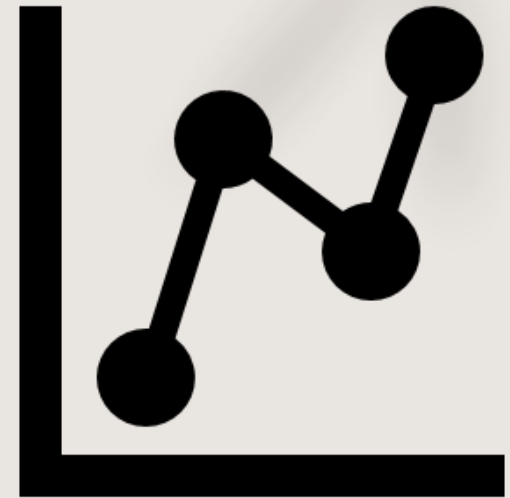
Discussion

- The version of the survey (layman's terms versus traditional report) had the most profound impact on the understanding of the radiology report.
- Other variables, such as age, income, education level, and confidence in the internet had little effect on a patients understanding.
 - Previous research showed lower health literacy in patients who are older and have a lower income (1).



Future

- Findings can help us design radiology reports in the future by putting in layman's terms in patients' EMR rather than keeping traditional reports.
 - Work directly with radiologists
- Research with questions to determine if improved understanding of radiology reports with layman's terms, will impact patients' healthcare decisions and benefit their overall health long-term.



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Limitations

A slight age difference between the two versions participants (traditional versus layman's), however age was not associated with ability to understand or interpret the reports

Survey Length

Bias:

Non-Response bias

Social Desirability:

Answering questions such as "language was easy", responders might answer in a way that makes them look better.

Hawthorne effect

Because responders know they are getting questioned on the report, they may read it more in depth than they would've if it was an actual report



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Questions?



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Picture Links

- https://en.wikipedia.org/wiki/The_Queen%27s_Medical_Center
- <https://www.prweb.com/releases/videoteldigital/queenshospital/prweb12732284.htm>
- <http://clipart-library.com/research-cliparts.html>
- <https://pixabay.com/vectors/search/survey/>



Thank you!