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## Patient Attitudes Toward a Physician Led Radiology Review: Improved Understanding of Medical Conditions and a Potential New Quality Metric

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# Patient Attitudes Toward a Physician Led Radiology Review: Improved Understanding of Medical Conditions and a Potential New Quality Metric

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## Background

An abundance of radiologic studies often accompany patients at a surgical consultation. These studies are time consuming for patients and costly for healthcare. Surgeons spend a great deal of time reviewing images in operative planning. Little is known about patients' attitudes toward viewing their own images and the implications of such a practice. This represents a gap in utilization of healthcare resources.

While the radiology community has published regarding the appropriateness and timing of a radiologist driven reporting of imaging results, the focus is on the legality and moral incentive of communicating abnormal imaging findings [1]. There is also some radiology literature describing patients' attitudes toward receiving imaging results. Specifically, patients reported that they wanted direct, but fast communication of results even if it meant that the results would not be communicated by the physician ordering the study [2 – 4]. In a study designed to evaluate patients' preferred delivery method, 85% of adult outpatients undergoing CT or MRI responded that they would want to see their images [4].

## Objectives

We were interested in understanding patient perspectives regarding the importance of reviewing their imaging studies with a surgeon.

### Specific Aims:

1. What value do patients place on viewing their imaging?
2. Do patients have a better understanding of their disease and planned operation after a surgeon led review of imaging studies?
3. Do patients find viewing images an accessible educational tool?

## Methods

- In this IRB approved study, we surveyed adult outpatients presenting for pancreaticobiliary surgical consultations between April 2016 and October 2016.
- The population represents a group with a complex medical diagnosis and treatment. Every patient routinely undergoes CT or MRI as part of their work-up.
- Imaging studies were reviewed by our pancreaticobiliary team prior to the patient encounter.
- Surveys were administered pre- and post-appointment, where a surgeon scrolled through CT and/or MRI scans and explained the anatomy and pathology to the patient.
- Using a 1 (strongly agree) to 5 (strongly disagree) Likert scale, patients reported their perceived importance of viewing the imaging studies and understanding of their medical condition.
- The time the surgeon spent physically reviewing the imaging studies with the patient during the consultation was recorded for every encounter included in the analysis.
- Analysis of pre-visit and post-visit responses was performed using a Wilcoxon signed rank test.

## Results

- A total of 63 surveys were administered with a 90% completion rate.
- Surgeons spent on average  $2.7 \pm 1.9$  minutes reviewing imaging studies with the patient and family during the consultation.

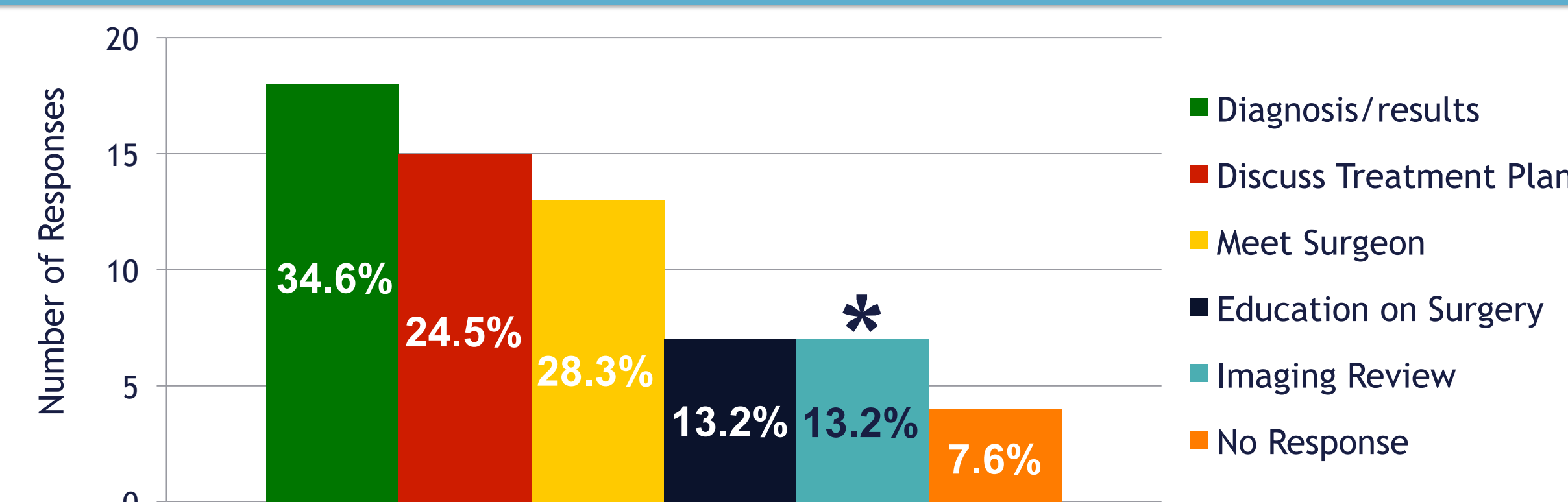
### PRE-VISIT

78% of patients had never seen their images before, but only 55% agreed that it was important to them.

### POST-VISIT

- 90% of patients strongly agreed or agreed that they understood their disease better having seen their imaging.
- 86% of patients strongly agreed or agreed that they understood the planned operation better having seen their imaging.
- 90% of patients strongly agreed or agreed that the review was worthwhile, including 100% of patients that were ultimately not deemed appropriate surgical candidates.
- 84% of patients found the review accessible.
- Only 8% of patient thought the review took too long and 12% of patients felt that the review of imaging was too complicated.
- **Based on comparison of their responses to pre- and post-visit questions, patients' perceived understanding of their medical conditions and the planned operations improved significantly ( $p = 0.001$  and  $<0.001$ , respectively) after the consultation.**

### What aspect of your entire office visit was the most important to you?



13.2% of patients reported that seeing their images was the most important part of their visit.

## Lessons Learned

This study provides insight into surgical patient perspectives on the (1) value, (2) effectiveness, and (3) accessibility of reviewing diagnostic imaging with a physician.

1. We found a large discrepancy (40% difference) between patients' perception of the importance of seeing their imaging before and after viewing their own imaging with a surgeon. This represents an opportunity to align physicians' and patients' views of high quality care.
2. We found a statistically significant improvement in the patients' responses to the questions assessing their understanding of their medical condition and of their planned operation after reviewing their imaging during the consultation. We believe that imaging review during patient encounters because they are powerful educational tools and may promote patient involvement in medical decision making.
3. The current climate of healthcare expects physicians to see more patients in less time, but also evaluates based on quality of care. On average, the surgeons in this study spent less than 3 minutes reviewing the images with patients and 92% of patients did not think this amount of time was excessive. We encourage surgeons to incorporate a short imaging review into their practice because it allows for value-focused care with an improvement in the utilization of costly resources.

## Future Directions

- Conduct patient surveys in other contexts (i.e. breast surgery, vascular surgery) to establish whether a similar effect on patient understanding exists.
- Provide resources needed for surgeons and surgical residents to implement this model into practice and establish an ongoing system for tracking patient experiences.
- Develop a curriculum to provide adequate training that would allow other providers to feel comfortable reviewing images with patients.
- Reviewing imaging studies with patients is an opportunity for better patient-physician communication and improved patient satisfaction. With the current focus on patient satisfaction as a quality metric, we propose that this practice be further analyzed as a potential quality metric.

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