

Best Practices in Intraoperative Pathology Consultations

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“The education of surgeons is the career-long task of the surgical pathologist.”

LiVolsi, 1995

Disclosures

Marcio Gomes has the following financial relationships to disclose:

- Educational Grants from: Pfizer, BMS, Merck, AstraZeneca, Roche, Eli Lilly, Boehringer-Ingelheim
- Honoraria from: Amgen, AstraZeneca, Merck

Marcio Gomes will not discuss off-label use or investigational use in this presentation

Matthew Cecchini has no financial relationships to disclose and will not discuss off-label use or investigational use in this presentation

Learning Objectives

- At the end of the session, the participants will be able to:
 - Recognize potential patient safety issues in intra-operative consultations
 - Identify strategies to mitigate risks and improve patient outcomes for intra-operative consultations
 - Consider different approaches to intra-operative consultations to optimize utilization of pathology resources

What is the reported discordance rate for frozen sections?

- A. 10%
- B. 7%
- C. 5%
- D. 2%

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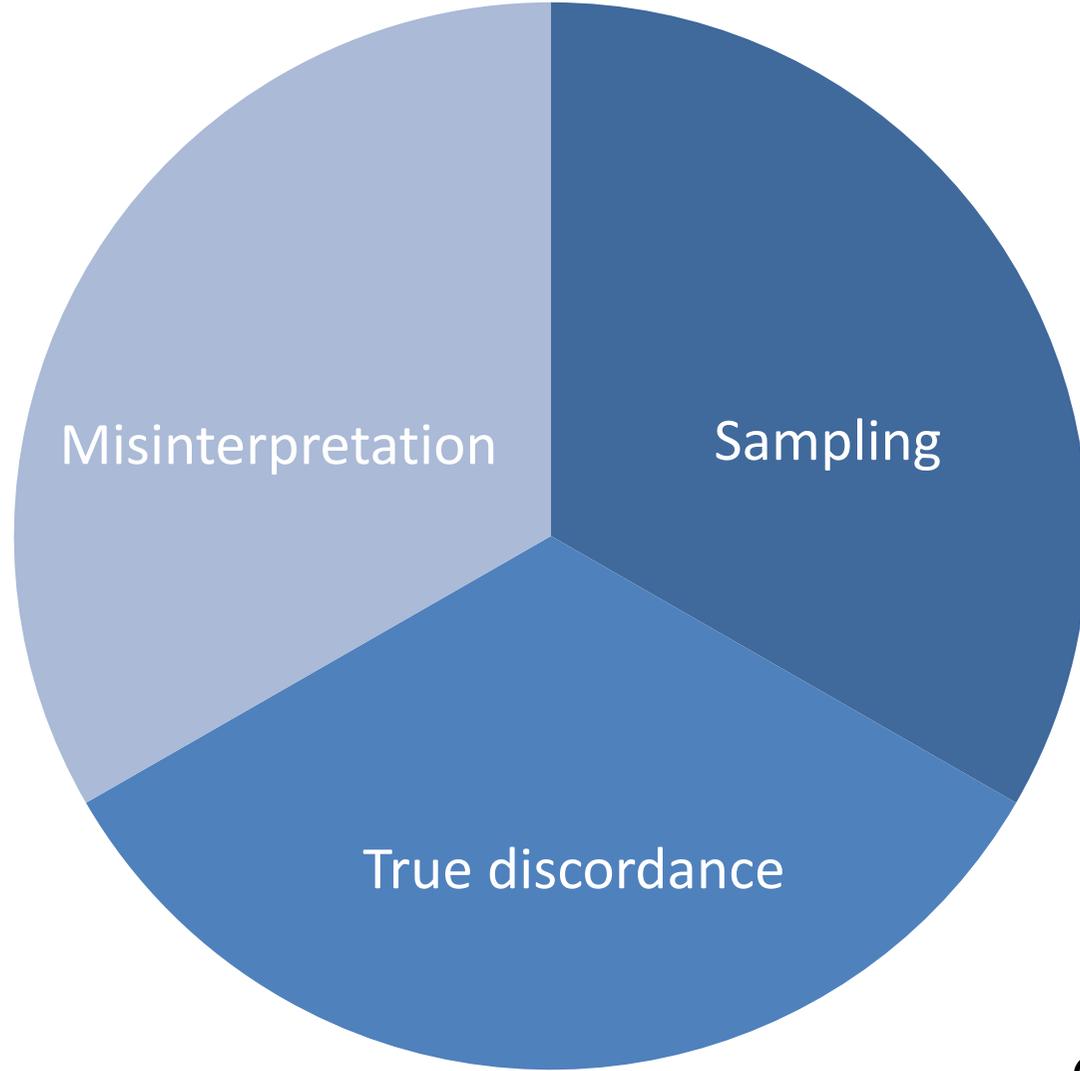
- A. 10%
- B. 7%
- C. 5%
- D. 2%

Of the discordant cases, what percentage of cases are from misinterpretation of the microscopic findings?

- A. 75%
- B. 46%
- C. 32%
- D. 16%

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Gephardt, 1996

What percentage of single block frozen sections are completed in 20 minutes?

- A. 90%
- B. 75%
- C. 50%
- D. 25%

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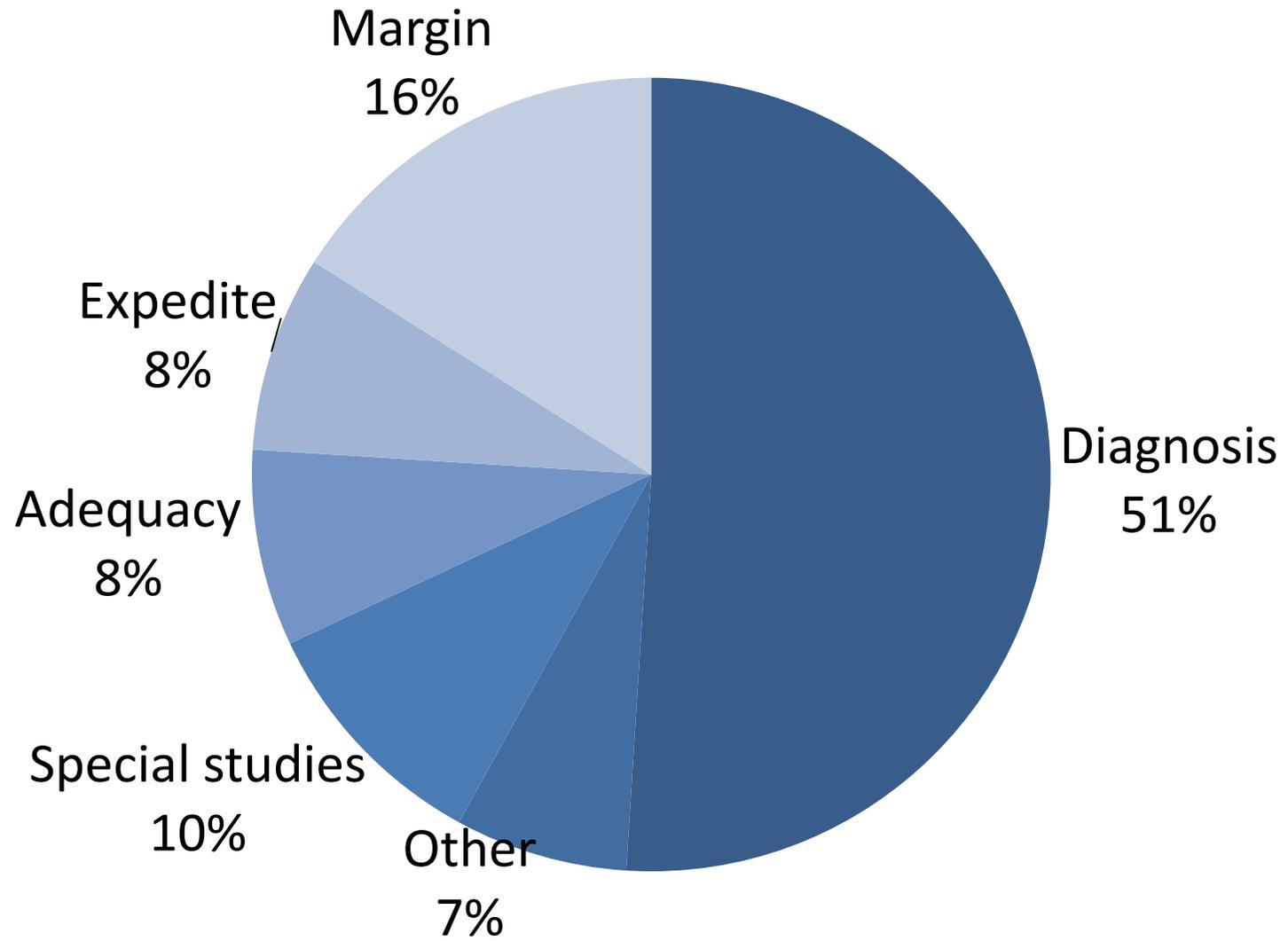
- A. 90%
- B. 75% (15 min)
- C. 50% (7 min)
- D. 25% (4 min)

What is the most common indication for frozen sections?

- A. Margin assessment
- B. Establish diagnosis for management
- C. Direct sampling for special studies
- D. Confirm adequacy
- E. Expedite pathologic diagnosis

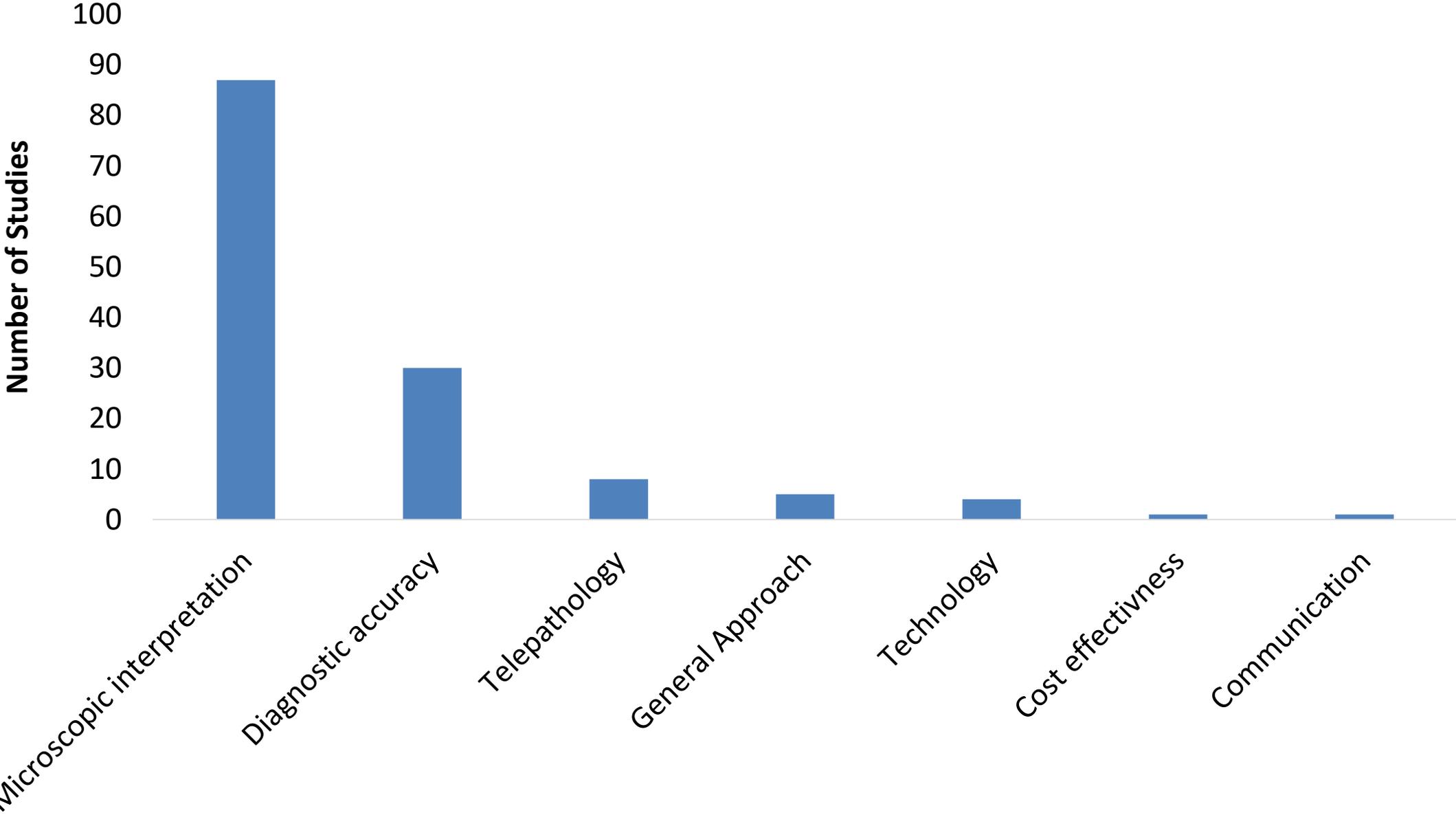
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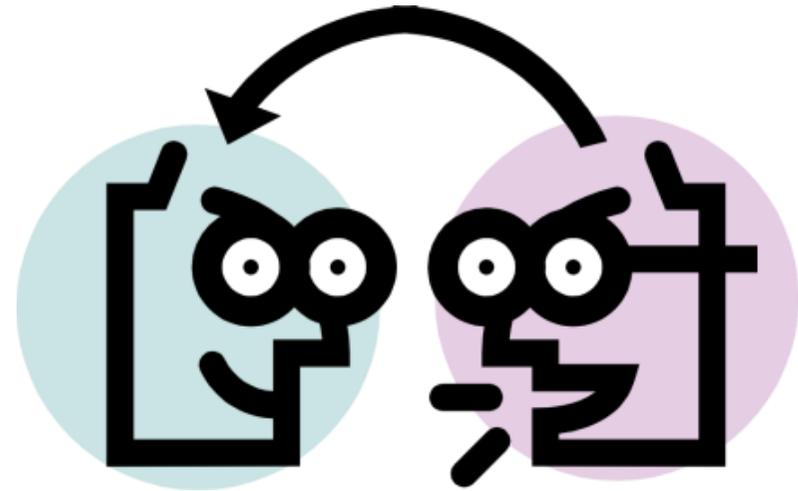
Zarbo, 1996

Pubmed search for: "Intraoperative Consultation" AND "Pathology"

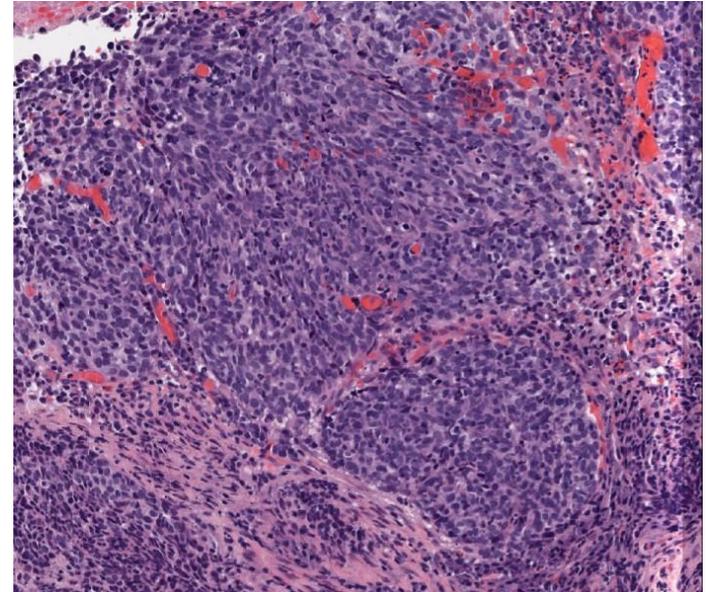


What are the common issues that we have in intraoperative consultations?

What was the last issue you had with an intraoperative consultation?

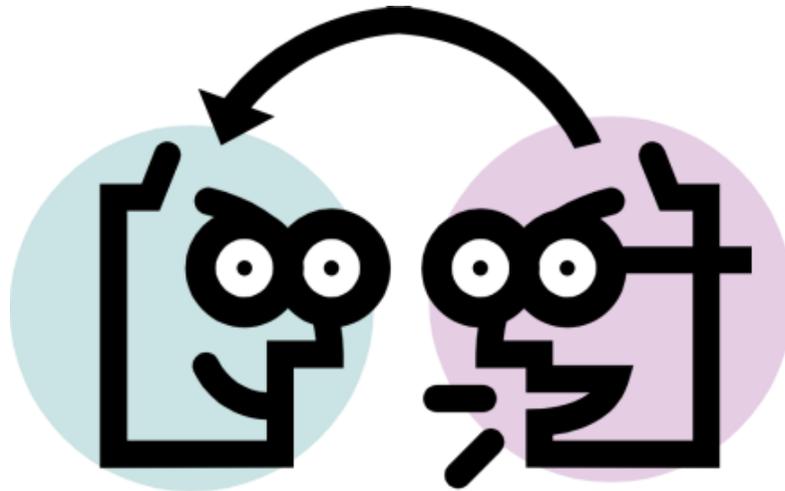


Case 1



Why do you think that happened?

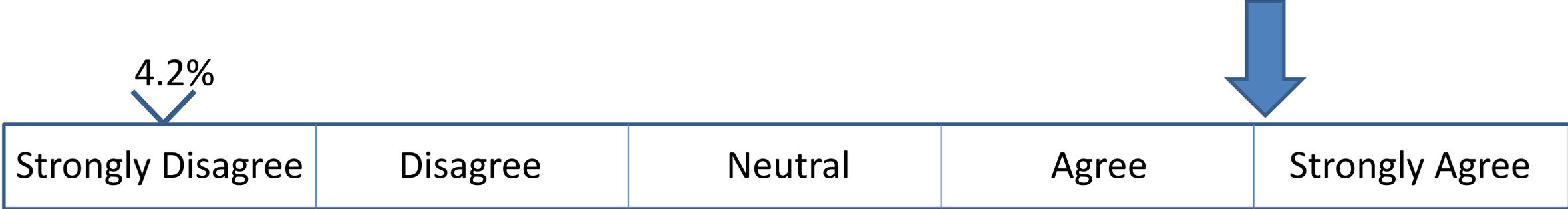
What could have been done to prevent this?



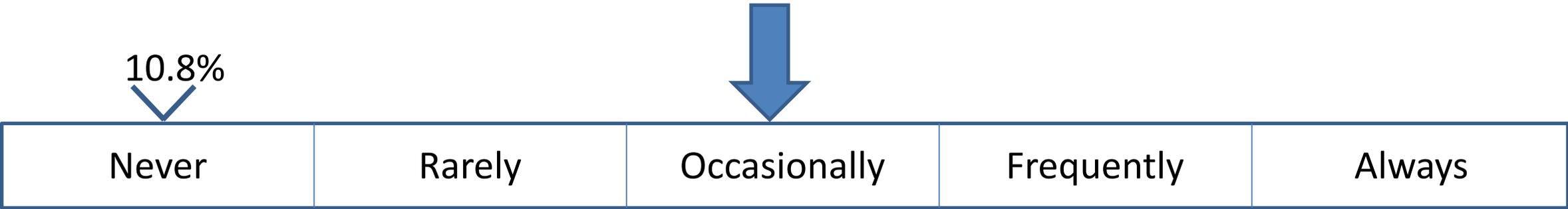
Survey

- Survey sent to OAP members
- 81 respondents
- Design to assess;
 - Local practice
 - Individual beliefs
 - Individual practice

IOC should not be performed without prior review of clinical data



IOC are performed without prior review of clinical data

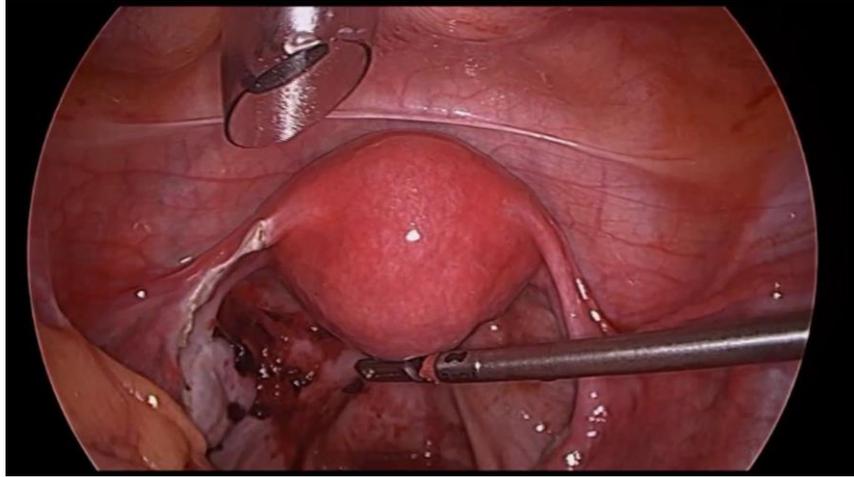


“There is really one purpose in the frozen section and that is to make a therapeutic decision...

Before a pathologist does a frozen section (they) should have all the clinical data...

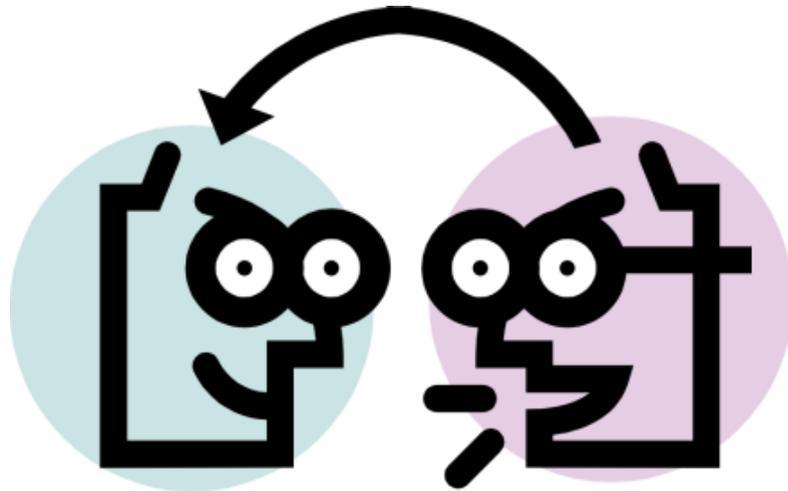
The patient may have had previous surgery at other institution and this material should be obtained and studied in advance by the pathologist.”

Case 2

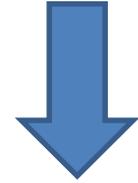


Why do you think that happened?

What could have been done to prevent this?



IOC should not be performed without clear indication from the surgeon



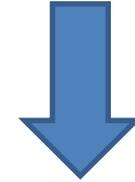
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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IOC are performed without clear indication from the surgeon



Never	Rarely	Occasionally	Frequently	Always
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IOC should not be performed in situations with no potential impact



Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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IOC are performed with no potential impact



Never	Rarely	Occasionally	Frequently	Always
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“The results will determine the further conduction of the surgical procedure. Otherwise, the setting of frozen tissue examination represents a tradeoff in terms of tissue preservation, extent of sampling, and ability to orient tissues, among other aspects, that results in a sub-optimal end product.”

“A frozen section is an emergent request requiring cessation of the activity of the moment (e.g., being paged out of a meeting, halting a sign-out session or phone call with another physician)”

Frozen section: Impact on Resources

- Histotechnologists:
 - out of the lab 50 min per frozen section case
 - average technologist cuts 35 blocks in this time
 - average # blocks per case is 4 = 8 patient cases
- Residents:
 - away for 40 min on average
- Pathologists
 - away for 35 min on average
 - average # biopsy slides 28 = 7 patient cases

IOC requests with inadequate purpose should be discussed with the surgeon prior to proceeding



Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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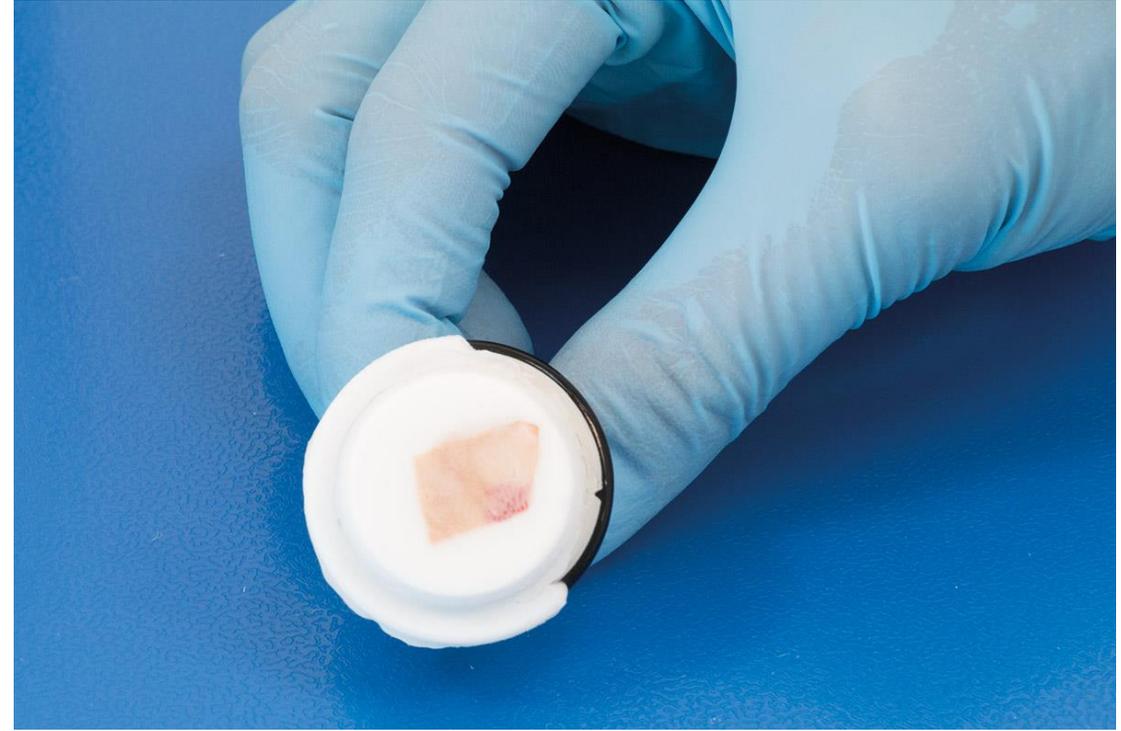
Fostering Communication



Fostering Communication

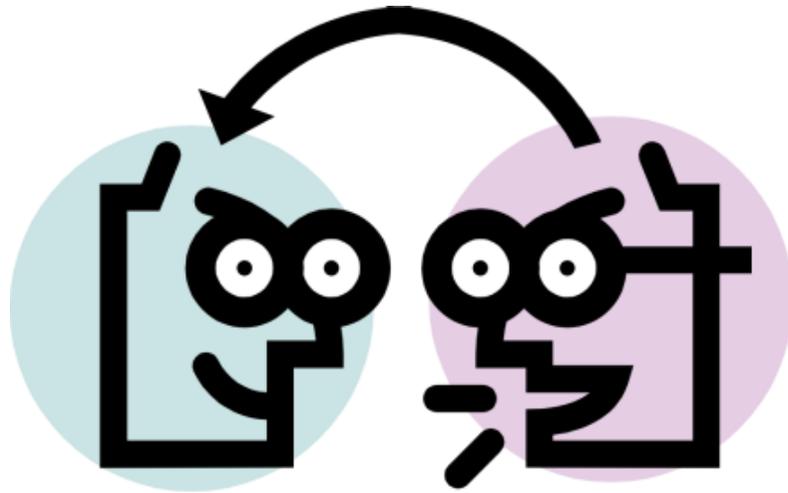
- Establish a relationship
- Demonstrate commitment to patient care
- Discuss common goals of care
- Develop a shared plan

Case 3



Why do you think that happened?

What could have been done to prevent this?



Specific direction should be given to the technologist on how to cut/process every frozen



Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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IOC are performed with no or inadequate direction to technologist

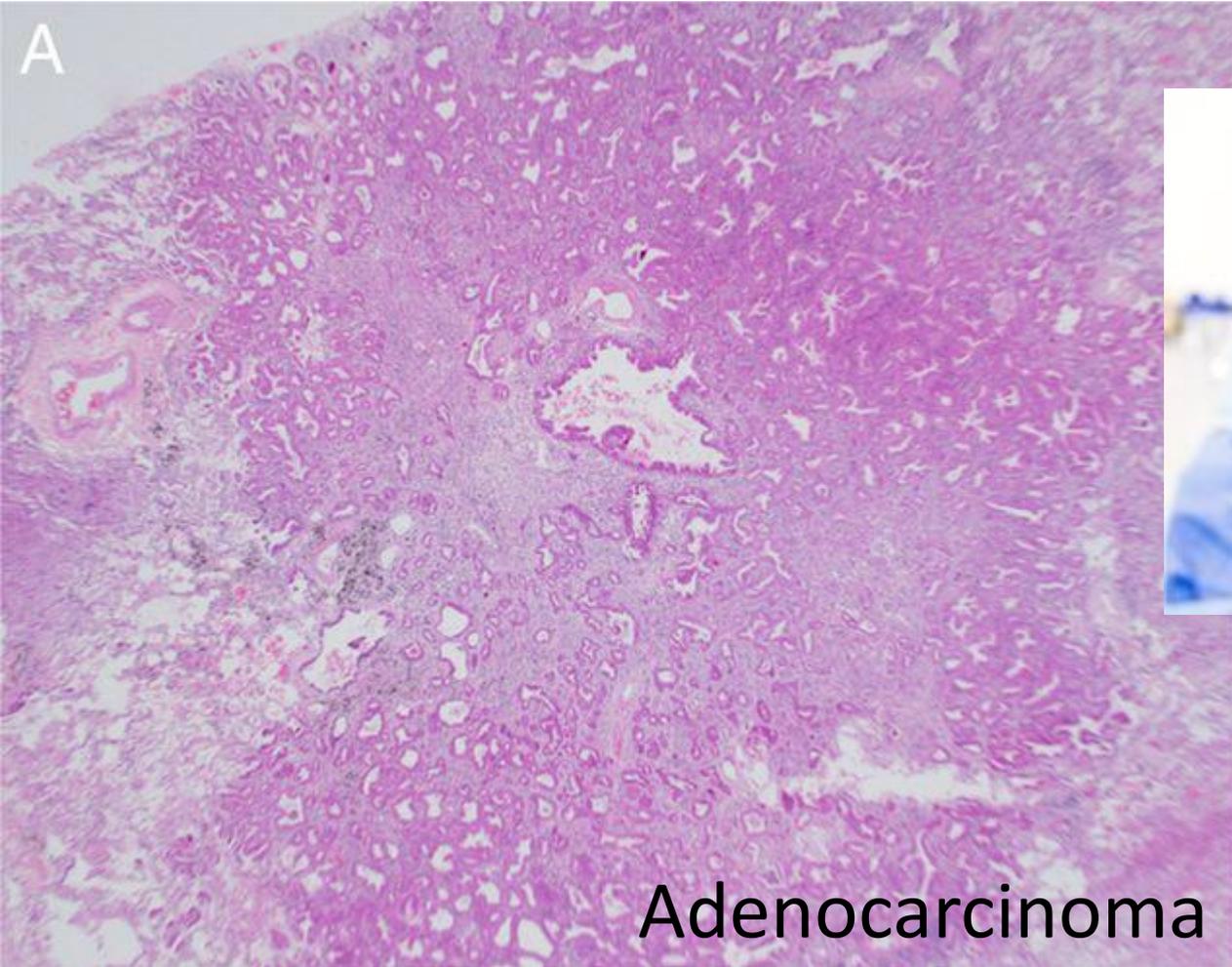


Never	Rarely	Occasionally	Frequently	Always
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Handover literature

- Changes in Medical Errors after Implementation of a Handoff Program (I-Pass)
 - Rate of preventable adverse events decreased by 30% (4.7 vs. 3.3 events per 100 admissions, $P < 0.001$)

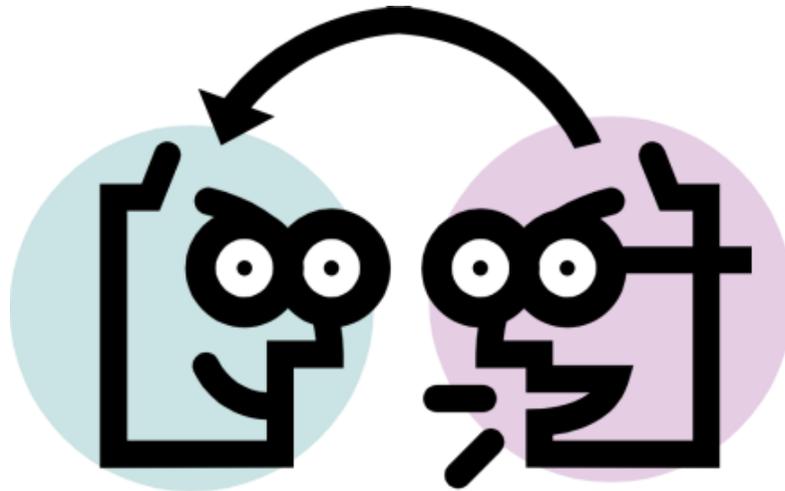
Case 4



“No Carcinoma”

Why do you think that happened?

What could have been done to prevent this?



Results should be given directly to the primary surgeon



Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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The results are given to someone other than the primary surgeon



Never	Rarely	Occasionally	Frequently	Always
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The surgeon should be asked to read back the diagnosis



Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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The surgeon is asked to 'read back' the diagnosis



Never	Rarely	Occasionally	Frequently	Always
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The pathologist should confirm that the management is concordant with the results



Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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Confirmation that the management is concordant with the results is obtained



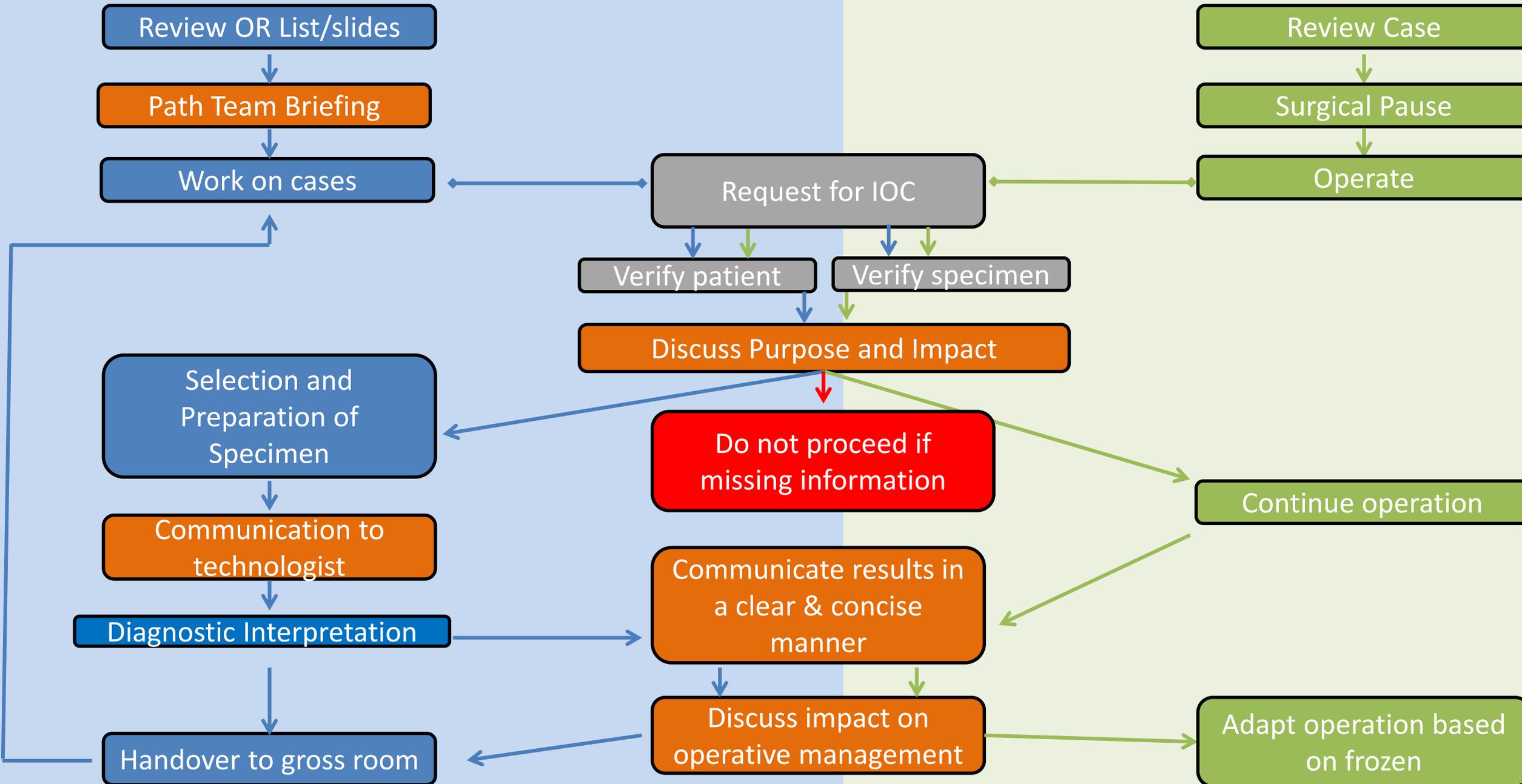
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“Our inability to interact effectively and efficiently with our patients, administrators, and non-pathologist physician colleagues is today’s greatest risk to our profession.”

“We need to understand that focused mentoring or education in communication is nothing to be ashamed or embarrassed about – and certainly nothing to shy away from.”

Tim Allen, 2018 (The Pathologist)

Proposed best practices for intraoperative consultations



“An informed practice of frozen section is a collaboration between multiple health care professionals for the benefit of the patients they serve.”

Adapted from Taxy, 2009

Goals of Care

- Clarify goals
 - Appropriate
 - Realistic
- Set priorities
 - Minimal requirements
 - Adapt to situation

What do we need to do?

- Actively engage with the healthcare team and get a seat at the table with them when decisions are being made.
- Routinely and collegially interact with our non-pathologist physician colleagues and our administrators.
- Involve ourselves in patient decision-making.

“Pathologists have traditionally met every challenge that has arisen in our profession; this is merely the next in line.”

Tim Allen, 2018 (The Pathologist)

References

Indications and discordance

Ackerman LV, Ramirez GA, Br J Surg 1959;46:336–350.

Q-Probes Studies

Discordance:

Gephardt GN, Zarbo RJ. Arch Pathol Lab Med 1996;120:804–809.

Indications:

Zarbo RJ, Schmidt WA, Bachner P, et al. Arch Pathol Lab Med 1996;120:19–25.

Turnaround time

Novis DA, Zarbo RJ. Arch Pathol Lab Med 1997;121:559–567.

References

Best practises (Expert opinion)

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Taxy JB. Frozen section and the surgical pathologist a point of view. Arch Pathol Lab Med 2009;133:1135–1138.

References

Hand-off

Starmer AJ, Spector ND, Srivastava R, et al. N Engl J Med 2014;371:1803–1812.