

ABSTRACT

- **Objective:** Assess patients' comprehension of Enhanced Recovery After Surgery (ERAS) and pre-operative instructions in Eastern North Carolina (ENC)
- **Background:** Healthcare literacy impacts health outcomes; ENC has low literacy and high poverty; ERAS pathways provide important pre-operative instructions
- **Methods:** Cross-sectional survey; patients undergoing gynecologic oncologic and colorectal surgery
- **Findings:** Majority of patients understood instructions; satisfactory pain control after meeting with a trained dietician one-on-one
- **Implications:** Clear communication crucial for improving patient experiences and impacting surgery/anesthesiology practice
- **Recommendations:** Tailored educational materials and alternative communication methods to address disparities and enhance patient outcomes

INTRODUCTION

- **Why care about healthcare literacy?**
 - Healthcare literacy, which involves the ability to access, comprehend, and utilize health-related information, is important as it influences patient adherence to instructions and improves patient outcomes.^{1,2}
- **What is ERAS?**
 - Enhanced Recovery After Surgery (ERAS) is a set of evidence-based protocols for optimizing patient care, playing a crucial role in perioperative practice. A cornerstone of ERAS is providing pre-operative instructions to patients.³
- **What makes Eastern North Carolina unique?**
 - Eastern North Carolina (ENC) faces challenges that may contribute to low healthcare literacy, such as higher poverty rates, lower education levels, and a higher concentration of low-wage occupations; ECU Health services a region where most counties have literacy levels below the state average.^{4,5,6,7,8}
- **What does current research say?**
 - Despite the increasing adoption of ERAS pathways in surgical care, there is a research gap with limited information on the impact of healthcare literacy on surgical patients.
- **What did we do?**
 - The research objective of our study is to investigate how patients in ENC understand ERAS and pre-operative instructions. This project was completed in collaboration with ECU Health's Colorectal Surgery and Gynecologic Oncology departments.

MATERIALS & METHODS

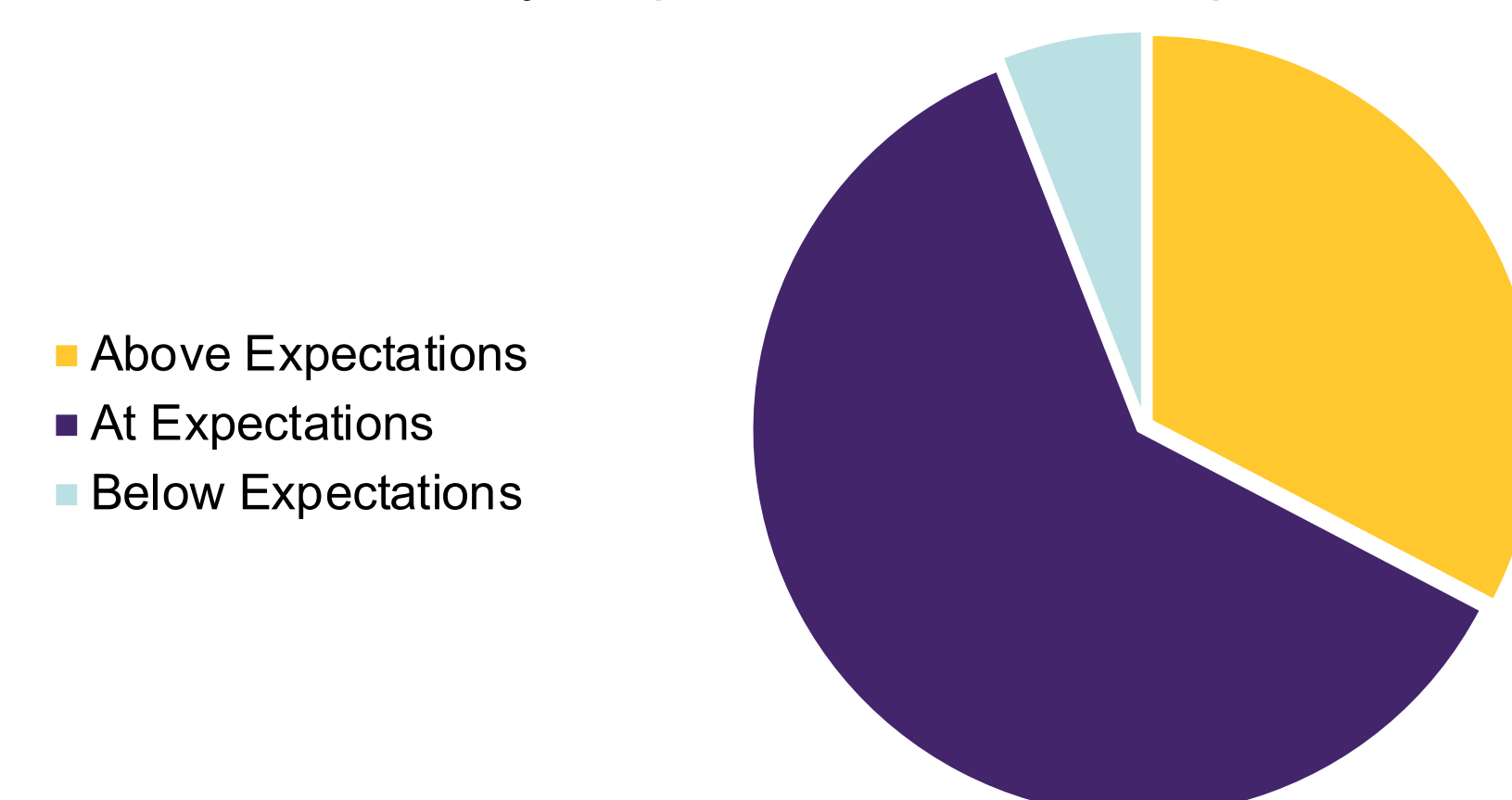
- **Literature review:**
 - Searched PubMed for "ERAS Education," "ERAS Feedback," and "ERAS Socioeconomics"
 - Discovered a paucity of studies whereby patients provide feedback on their experience with ERAS, especially in at-risk populations like Eastern North Carolina
- **Survey:**
 - A survey was created to assess patient understanding of ERAS. It was composed of 10 binary questions with an open-ended feedback section
 - The 101-patient surveyed sample were patients enrolled in ERAS program between July 25, 2022, and January 31, 2023, undergoing gynecologic oncology or colorectal surgery
 - The patients were seen pre-operatively by a trained dietician when given their preoperative instructions including ERAS information and nutritional counseling
 - To increase accessibility and understandability, the survey was administered at the first post-operative visit verbally by a medical assistant
- **Data analysis:**
 - Data from 101 patients were analyzed in Excel to assess instruction understanding, adherence, and post-operative pain control.

RESULTS

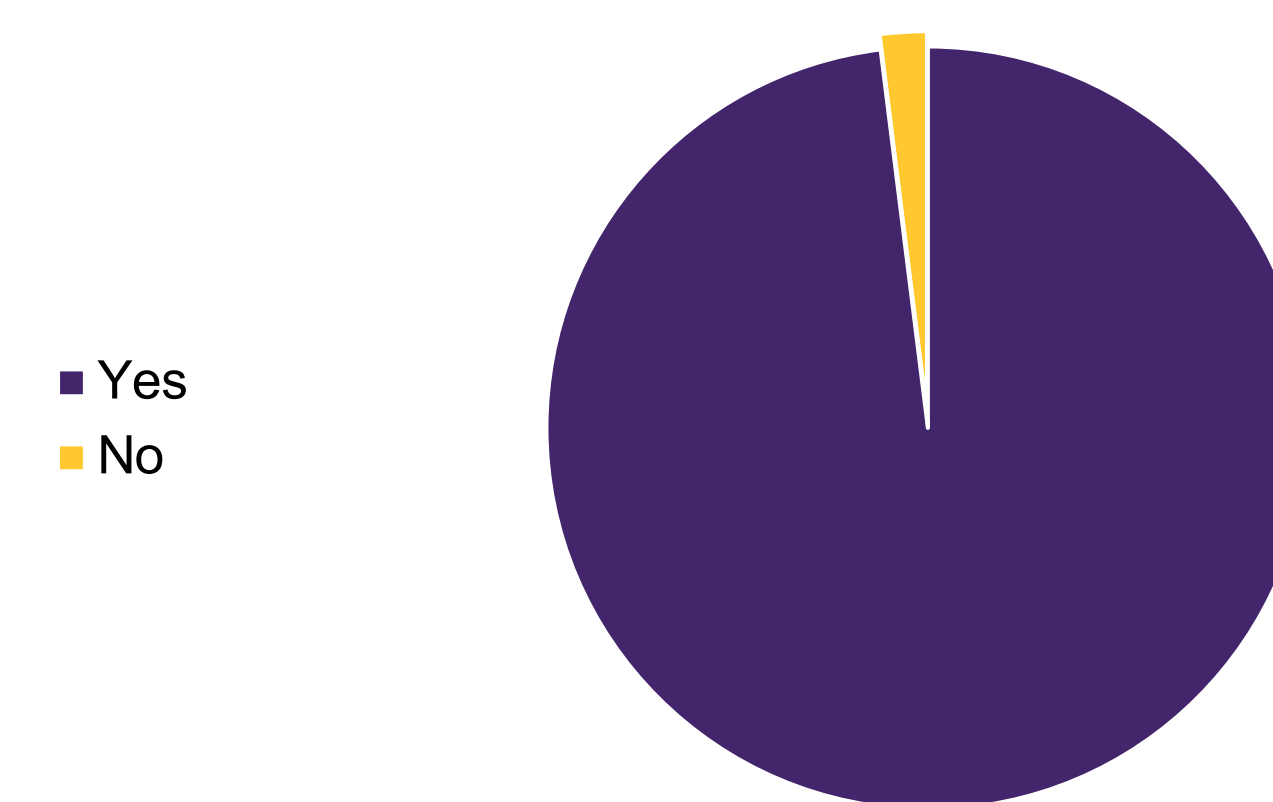
Of the 101 patients surveyed after surgery in the ECU Health Departments of Surgical Gynecologic Oncology and Colorectal Surgery:

- 98% found their diet instructions easy to follow
- Clear liquid choices: 92% water, 35% juice, 22% coffee, 3% none, 25% other
- 93% drank the provided protein shake
- 88% knew why protein shakes were part of instructions
- 96% felt they received consistent surgical preparation information from care providers
- Pain control: 33% above expectations, 61% at expectations, 6% below expectations
- 19% took blood thinners pre-surgery, 100% of whom reported they received instructions on properly stopping and restarting medications
- 79% owned a smartphone

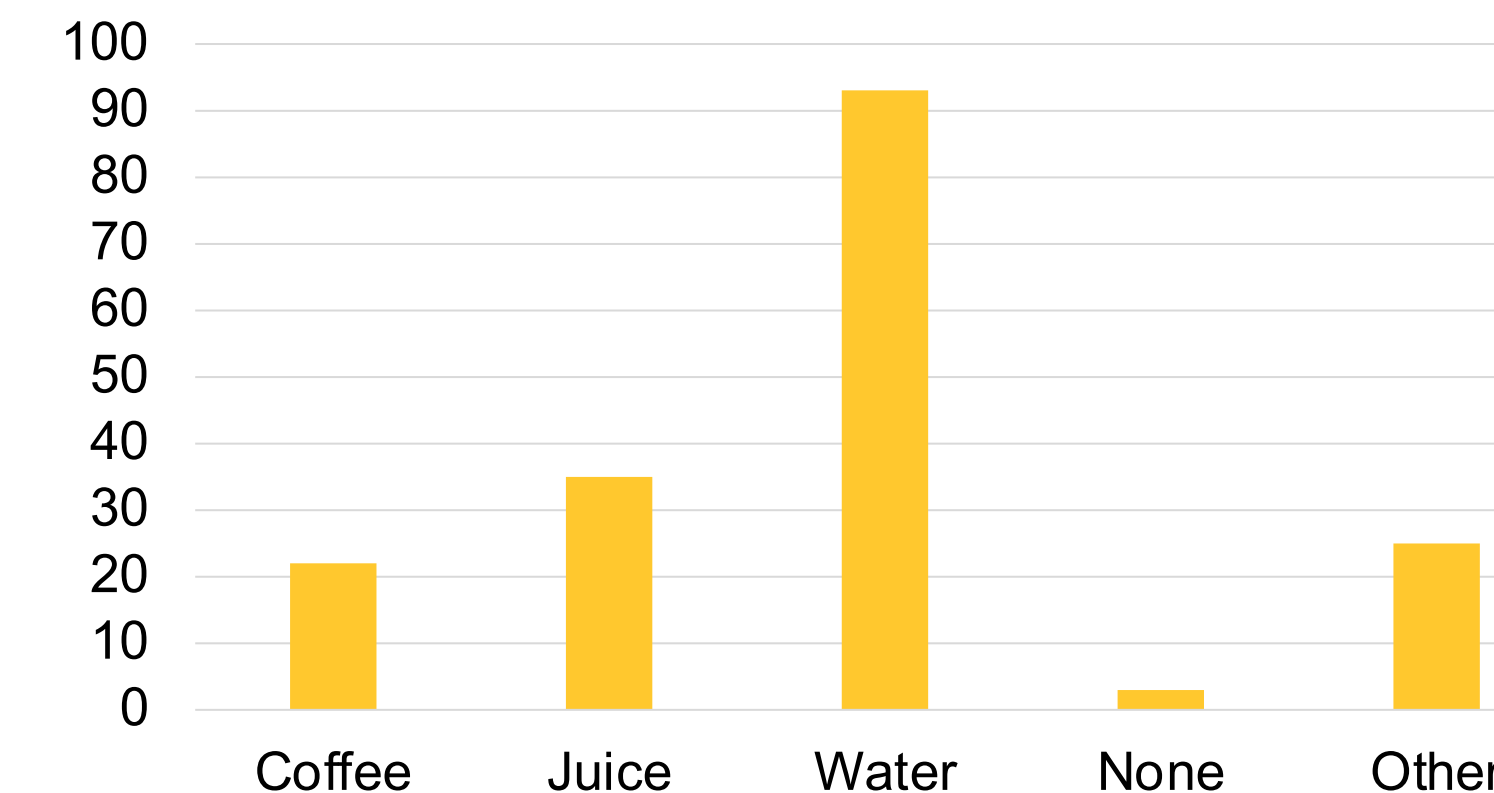
How was your pain control after the procedure?



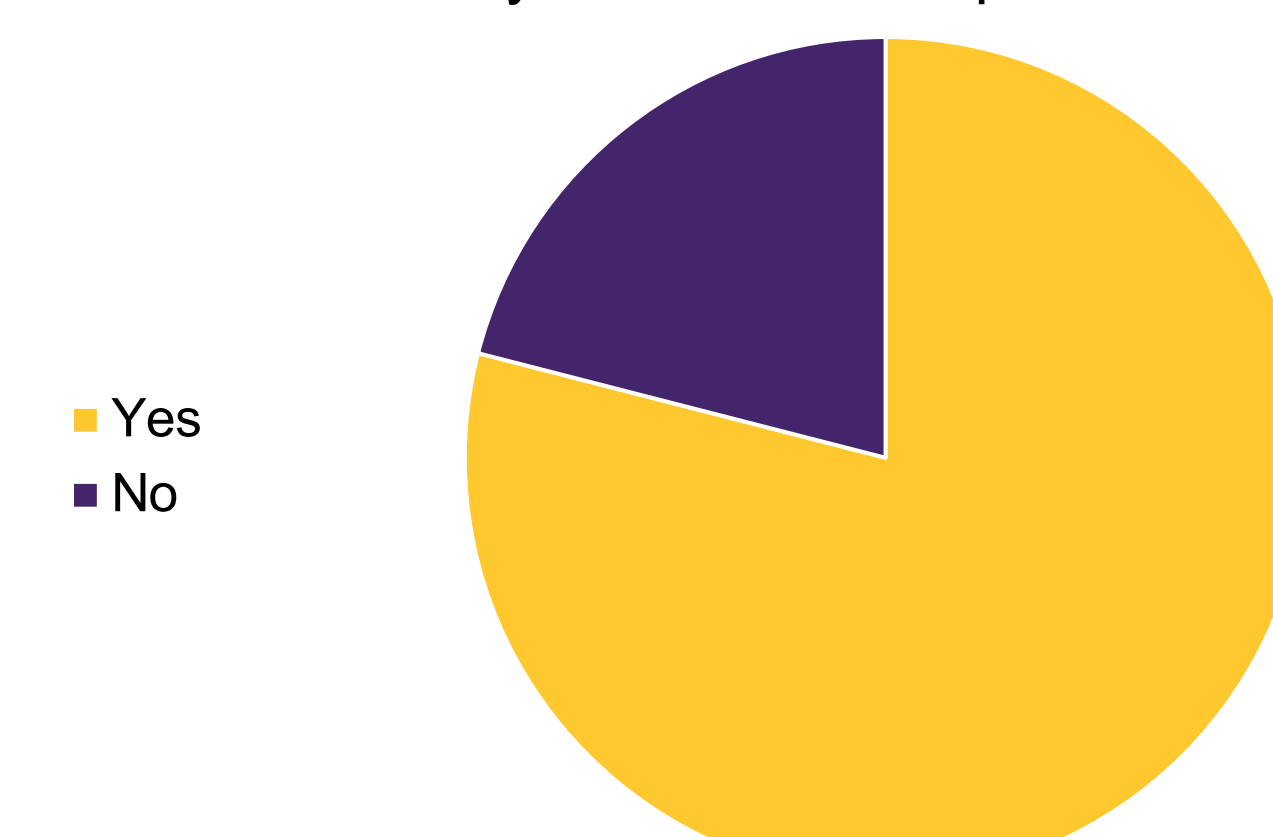
Were the pre-op instructions for your diet easy to follow?



What clear liquids did you choose?



Do you own a smartphone?



DISCUSSION

- High patient understanding (98%) of pre-operative ERAS instructions, with the majority (94%) reporting pain control met or exceeded expectations
- Clear, consistent information mitigated barriers in low-literacy patient population
- 21% of patients reported not owning a smartphone, highlighting digital connectivity issue in Eastern North Carolina
- Future research: understanding "too much information," reasons for not understanding protein shake instructions, and patient experiences based on healthcare literacy
- **Conclusion:** The study showed that most patients in Eastern North Carolina comprehended and adhered to the pre-operative ERAS pathway instructions and reported satisfactory post-operative pain control. Effective open communication and addressing patient concerns were successful, despite the region's historically low education levels. The digital divide in Eastern North Carolina still poses challenges for healthcare information access, warranting future research on understanding barriers, tailoring educational materials, and exploring alternative communication methods.

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