

**PD32-07: Barriers to single-dose intravesical
chemotherapy in non-muscle invasive bladder cancer:
What's the problem**

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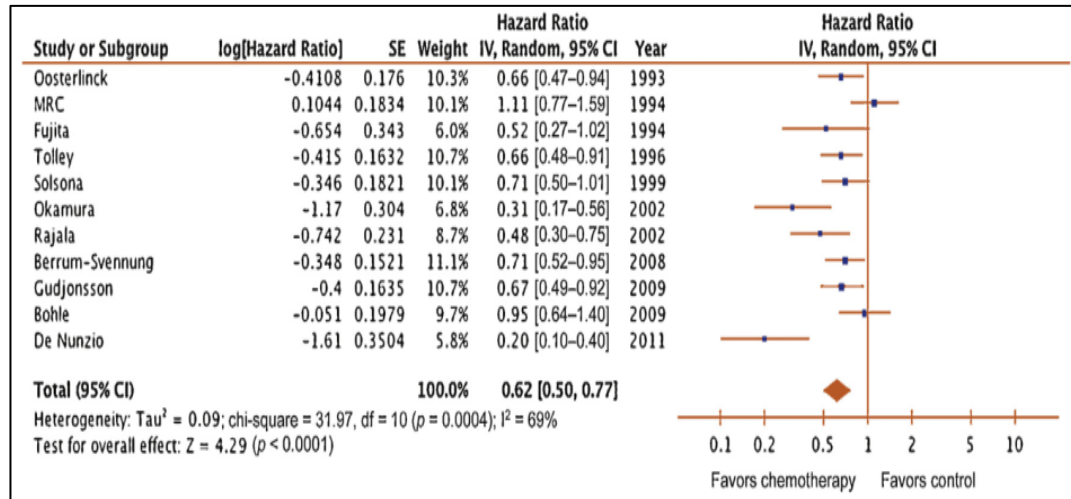
Introduction

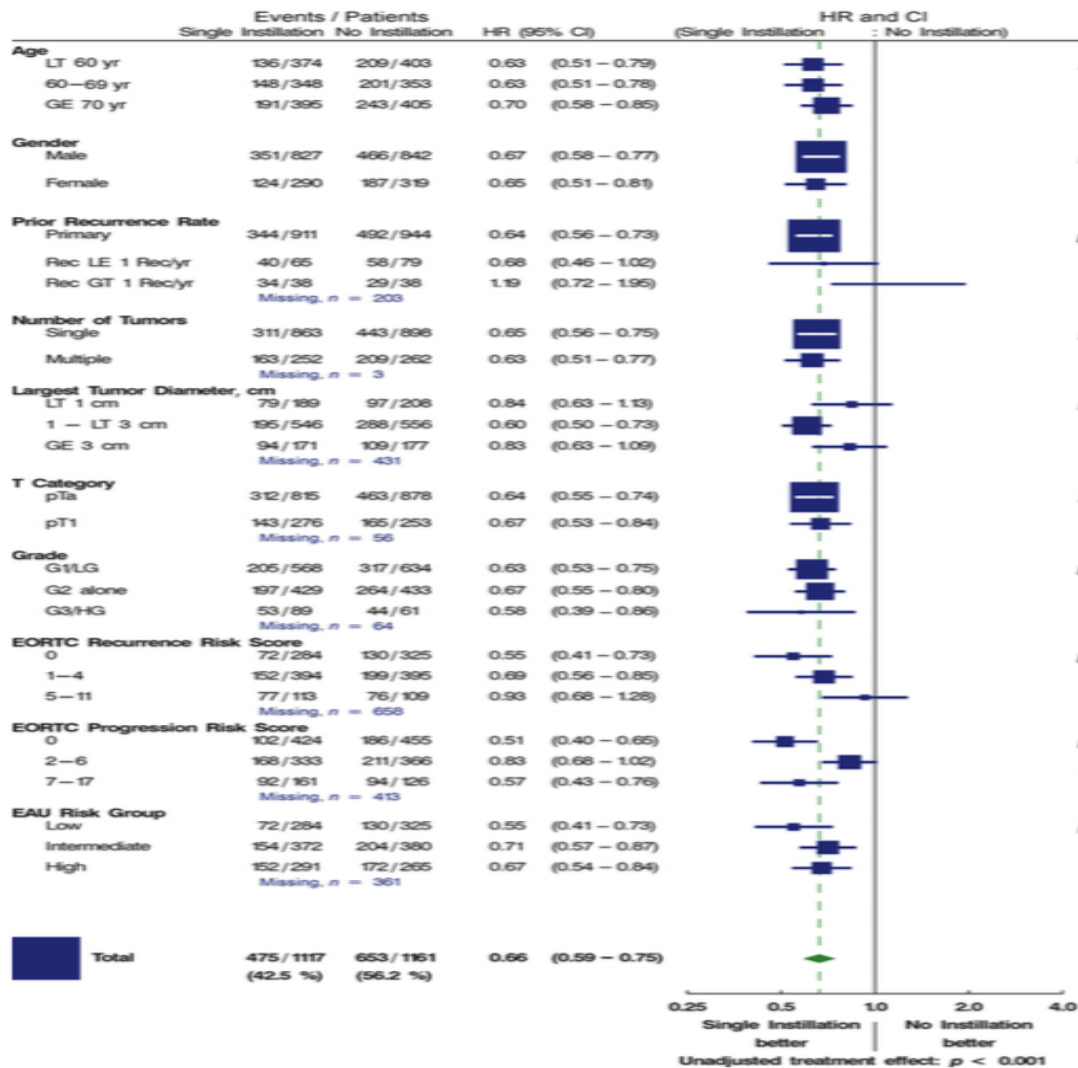
- Bladder cancer is common
 - 4th most common cancer; ~80,000 new case/yr
- Frequently recurs following initial treatment
- Multiple RCTs show evidence to reduce recurrences



Background

- Single dose of mitomycin
 - 30-40% relative reduction in cancer recurrences





➤ Sylvester et al. *Eur Urol* 2016

➤ Meta-analysis

- 13 RCTs
- 2,278 patients

➤ HR 0.65 (95% CI 0.58-0.74)

➤ 5-yr recurrence rate down 14%

➤ Not effective in patients with multiple recurrences in a year, large tumors, or if EORTC high risk

Despite this consistent data, widespread use has been low among urologists

- Incidence of use in literature
 - ✧ Ranges from 0.33% - 38%



What do the experts say?

- European Association of Urology

In patients with tumours presumed to be at low risk and in those presumed to be at intermediate risk with previous low recurrence rate (less than or equal to one recurrence per year) and expected EORTC recurrence score < 5, one immediate chemotherapy instillation is recommended.

- American Urological Association

15. In a patient with suspected or known low- or intermediate-risk bladder cancer, a clinician should consider administration of a single postoperative instillation of intravesical chemotherapy (e.g., mitomycin C or epirubicin) within 24 hours of TURBT. In a patient with a suspected perforation or extensive resection, a clinician should not use postoperative chemotherapy. (Moderate Recommendation; Evidence Strength: Grade B)



Implementation matrix

Study Aims	Data Collection Procedures	Data Analysis Procedures	Products or Outcomes
Aim 1: To determine the barriers and facilitators to intraoperative intravesical chemotherapy utilization in non-muscle invasive bladder cancer	<ul style="list-style-type: none">-Individual semi-structured interviews-Post-interview memoing-Session note taking-Recordings of interviews	<ul style="list-style-type: none">-Code development-Emergent thematic development	<ul style="list-style-type: none">-Barriers/facilitators identified to inform clinical vignette development to understand rank order of their importance



Methods

- Semi-structured interviews with urologists
- Convenience sampling of urologists in 4 distinct geographic regions of the state
- Total number of urologists interviewed determined by thematic saturation



Methods

- Cognitive task analysis
 - Aid in articulating unspoken aspects of expertise
 - Incident-based interviews



Methods

- 2 Cognitive Task Strategies employed
 - Task Diagram
 - Framework to elicit major steps required in a task
 - Critical Decision Method
 - Critical points determined in the surgery which are then further explored



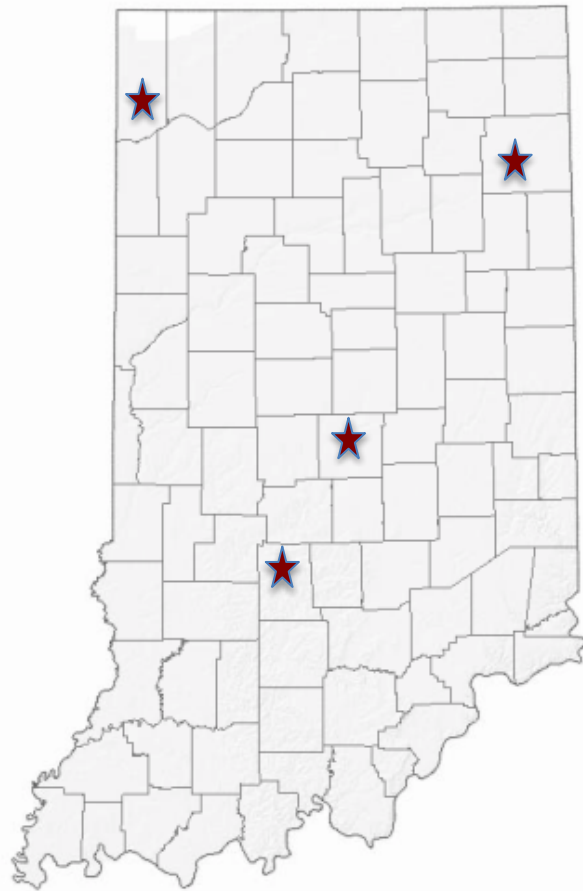
Methods

- Interviews were audio-recorded and transcribed for thematic analysis
- Following each interview:
 - Team met to review field notes
 - Develop memos to summarize findings
- Initial themes were developed then re-applied to ensure emergent themes captured



Results





- Indianapolis (Marion)
- Ft. Wayne (Allen)
- Merrillville (Lake)
- Bloomington (Monroe)



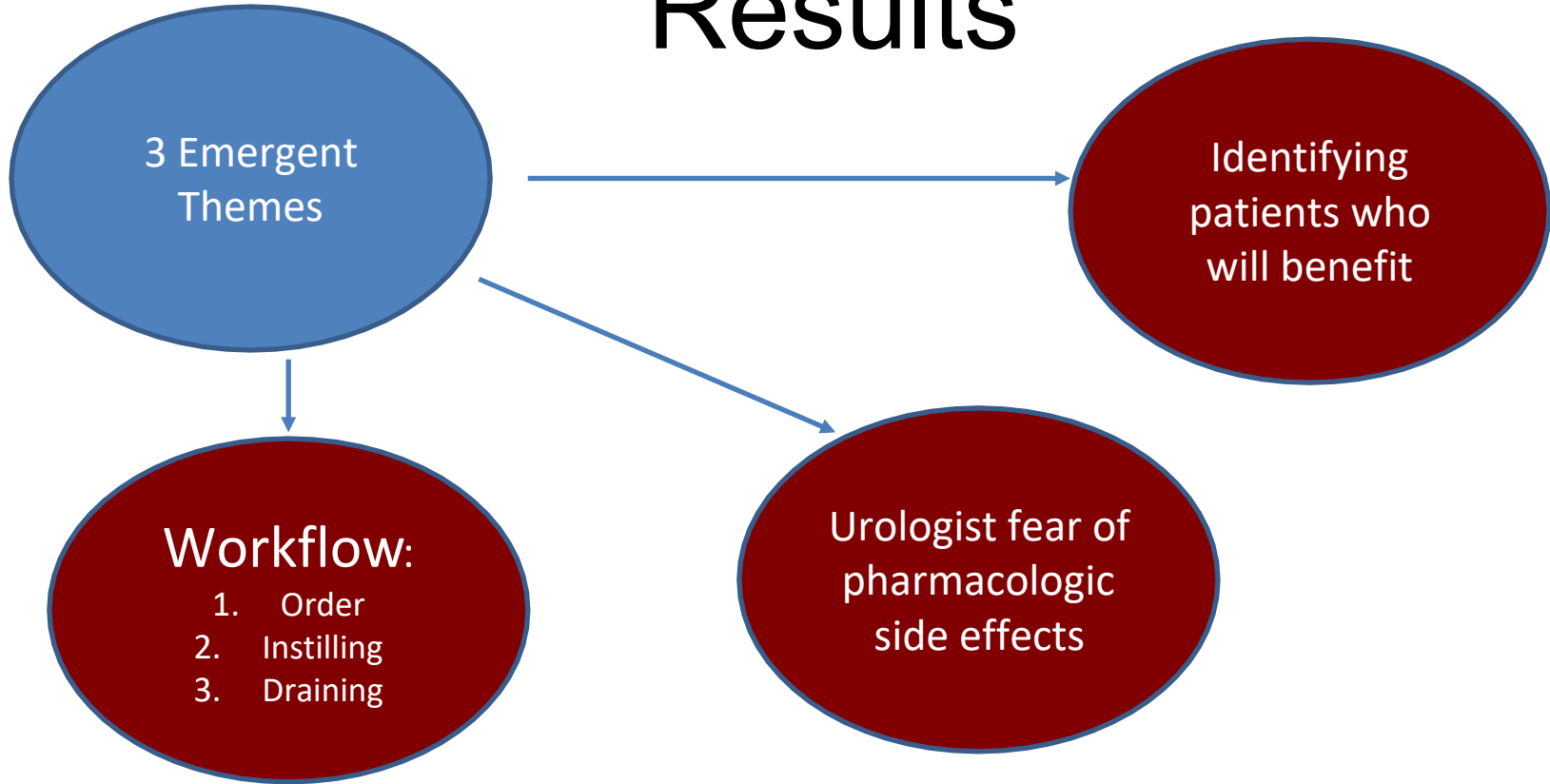
Urologist Characteristics	
Median Age (IQR)	44 (40-48)
Race (%)	
• Caucasian	12 (85)
• African-American	1 (8)
• Asian	1 (8)
Gender	
• Male	11 (85)
• Female	2 (15)
# of years in practice	
• 1-5	5 (39)
• 6-10	4 (30)
• 11-15	1 (8)
• 16-20	2 (15)
• >20	1 (8)



Urologist Characteristics	N (%)
Fellowship training <ul style="list-style-type: none"> • Urologic Oncology • Minimally-invasive/robotic • None 	2 (15) 2 (15) 9 (70)
Type of Urology Practice <ul style="list-style-type: none"> • Academic • Private practice (>8 urologists) • Hospital-employed 	2 (15) 8 (62) 3 (23)
Hours/week in clinical practice <ul style="list-style-type: none"> • <25 • 26-45 • 46-60 • >61 	0 4 (31) 6 (46) 3 (23)



Results



Theme 1: Workflow



Workflow

Ordering drug before the OR

- **Barrier**
 - If ordered too soon and determined not needed....waste the drug
- **Facilitator**
 - Part of preop checklist
 - No delay in getting medication



Workflow

Ordering drug *in* the OR

- **Barrier**
 - Up to 60 min delay in receiving medication
 - Variation on how it gets ordered
- **Facilitator**
 - Given as a verbal order making easy on MD



Workflow

Draining drug

Facilitators

- Protocols and trained RNs



- “no waiting in the OR” and “nurses drains it and sends patient home”

Barriers

- Low volume facilities with unfamiliar ordering protocols and untrained nurses



- “it was like it took forever” and “repetitively paging MD... a deterrant”



Theme 2:

Fear of pharmacologic side effects of drug



Fear of pharmacologic side effects

- Some reluctance to use MMC after TURBT noted and uncertain “trust” of the drug
 - “Did this patient have any trouble [side effects of mitomycin]?”
The urologist responded, “no, neither one of them did....Thank God.”
 - One stated, “There was no perforation or anything, but he had a horrible reaction... like chemical cystitis with a lot of pelvic pain.”



Fear of pharmacologic side effects

- Net results:
 - Questioning the benefits
 - Risks too great
 - This fear seemed to outweigh the evidence-based recommendations for some urologists



Theme 3:

Identifying patients most likely to benefit



Certainty and Uncertainty of who will benefit

- Majority of urologists were certain who was appropriate for MMC
 - “Recurrent tumors, small tumors, papillary appearing tumors”
 - “No bladder perforations”



Certainty and Uncertainty of who will benefit

- Minority were uncertain about best patient population
 - “I use it after the patient has had multiple recurrences”
 - “I think it is best for high-grade lesions”
- These MDs aware of data but unclear on precise patients to benefit in some situations



Conclusion

- We identified facilitators and barriers of this evidenced based intervention to reduce cancer recurrence
- The decision to use and workflow surrounding the medication can be complex, time consuming, and elucidates uncertainty and fear of side effects in participating urologists
- Future research will explore which barriers are the most important in this process through conjoint analysis

