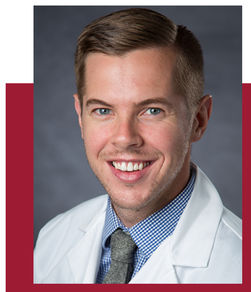
# MP02-06
# REFERRAL DELAY AS A CAUSE OF TREATMENT DELAY IN PATIENTS WITH MUSCLE INVASIVE BLADDER CANCER

**JOSHUA A. LINSCOTT, MD, PHD[1,2]**, WILLIAM C. DALY, MS[2,3], TRACY ROBBINS, RN[1], LISA T. BEAULE, MD[1,2], MATTHEW H. HAYN[1,2], MD, MORITZ H. HANSEN[1,2], MD, JESSE D. SAMMON, DO[1,2,3], STEPHEN T. RYAN, MD[1,2]

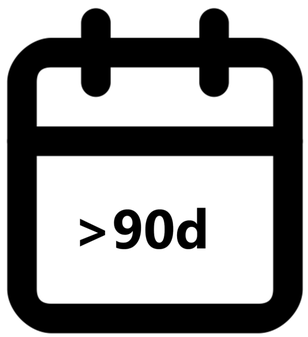
[1]MAINE MEDICAL CENTER, DIVISION OF UROLOGY, PORTLAND, ME,; [2]TUFTS UNIVERSITY SCHOOL OF MEDICINE, BOSTON, MA, [3] MAINE MEDICAL CENTER, RESEARCH INSTITUTE & CENTER FOR OUTCOMES RESEARCH AND EVALUATION, PORTLAND, ME



Maine Medical Center
MaineHealth

# OVERVIEW

- Previously, we identified barriers to bladder cancer care. Our aim was for all patients to receive treatment within 90 days of diagnosis. This led to a nurse navigator program to mitigate delays.
- Herein, we perform follow-up analysis to determine the impact of nurse navigation and identify areas for further improvement and avoid delays in treatment.
- *We proposed that there are multiple possible sources of delays and focused on:*
  - *Patient related travel time*
  - *Provider related referral delays*




Maine Medical Center
MaineHealth

# Referral Delay as a Cause of Treatment Delay in Patients with Muscle Invasive Bladder Cancer

**Joshua A. Linscott, MD, PhD[1,2]**, William C. Daly, MS[2,3], Tracy Robbins, RN[1], Lisa T. Beaule, MD[1,2], Matthew H. Hayn[1,2], MD, Moritz H. Hansen[1,2], MD, Jesse D. Sammon, DO[1,2,3], Stephen T. Ryan, MD[1,2]

*[1]Maine Medical Center, Division of Urology, Portland, ME,; [2]Tufts University School of Medicine, Boston, MA, [3] Maine Medical Center, Research Institute & Center for Outcomes Research and Evaluation, Portland, ME*

## Purpose:

- Previously, we identified barriers to bladder cancer care Our aim was for all patients to receive treatment within 90 days of diagnosis. This led to a nurse navigator program to mitigate delays.
- Herein, we perform follow-up analysis to determine the impact of nurse navigation and identify areas for further improvement.
- Possible sources of delays were proposed
  - Patient related travel time
  - Provider related referral delays

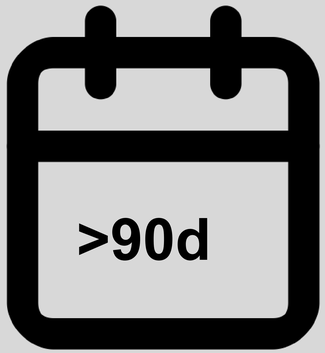
## Methods:

- Patients requiring cystectomy for bladder cancer at a tertiary care facility were identified following the implementation of an independent nurse navigation program
- Dates were recorded:
  - (A) procedure prompting cystectomy
  - (B) referral to cystectomy provider
  - (C) consultation with provider
  - (D) receipt of treatment (NAC or cystectomy).
- Patients were grouped into external and internal referrals
- Nurse navigation was instituted at time of consultation (C)
- Delay was defined >90 days from procedure to treatment (A to D)
- Travel time was mapped as drive time (minutes) from patient home to facility.
- Intervening milestones to care were analyzed based on first 10 records, power analysis was estimated (n=50). Wilcoxon analysis compared patient related (travel time) and provider related factors (days to referral).

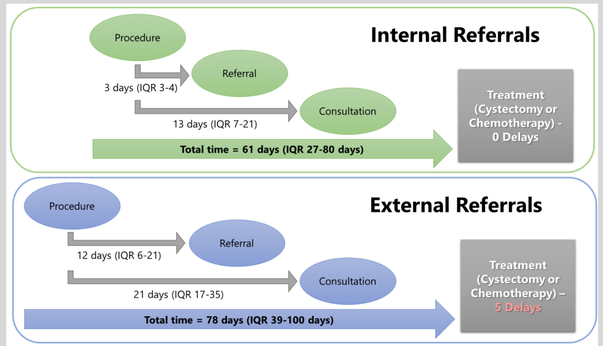
## Results:

- Of the 53 patients reviewed, 18/18 (100%) internal and 30/35 (86%) external regional referrals were treated within 90 days.
- Time from procedure to consultation was longer for external referrals compared to internal referrals 21 days (IQR 17-44) vs. 13 days (IQR 7-21), p=<0.001.
- Time from procedure to referral was longer in the external group (13 days, IQR 6-26) compared to the internal group (3 days, IQR 3-4).
- Patients in the upper quartiles of referral delay had shorter travel times to the treatment facility [≥13 days: 40 mins (IQR 31-52)] compared to those referred earlier [<13days: 74 mins (IQR 51-99), p=<0.002].

### Delays in treatment (>90d) after diagnosis of muscle invasive bladder cancer is associated with worse outcomes




### External referrals had a longer time to placement, increased time to consult for treatment and 5 delays in care




### Distance to treatment center was not associated with delays. Earlier statewide independent nurse navigation may reduce referral delays

**- External referrals** were more likely to experience **delays (>90d)** in **muscle invasive bladder cancer** treatment. These **delays** were more frequent in patients **living closer** to the **treatment facility.**

**- We suggest independent nurse navigation earlier in care to address structural, political, and cultural causes of delays.**

Scan the QR code to join the conversation

*jlinscott@mmc.org*

*@jlinscottMD*