

**Longitudinal Health-Related Quality of Life after  
Radical Cystectomy: Comparison of Ileal Conduit,  
Indiana Pouch, and Neobladder  
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# Background

- With multiple options for urinary diversion following radical cystectomy, health related quality of life (HRQOL) is an important consideration during the shared decision-making process with patients being treated for bladder cancer.



# Purpose

- We aimed to characterize the HRQOL reported by patients who received an ileal conduit, Indiana pouch, or neobladder urinary diversion utilizing the Functional Assessment of Cancer Therapy-Bladder Cystectomy (FACT-BI-Cys) validated patient health survey.
- Formerly FACT-Vanderbilt Cystectomy Index



# Materials and Methods

- The FACT-BI-Cys survey was administered to 146 patients with bladder cancer undergoing radical cystectomy and urinary diversion at Indiana University from 2014-2018.
- The FACT-BI-Cys is a 42 question survey with categories comprising:
  - Physical Well-Being
  - Social/Family Well-Being
  - Emotional Well-Being
  - Functional Well-Being
  - Treatment-specific cystectomy instrument



# Materials and Methods

- Surveys were then completed prior to radical cystectomy and longitudinally throughout the post-operative course up to 48 months.
- Trial Outcome Index (TOI) was utilized to assess longitudinal improvements in HRQOL
  - Physical Well-Being, Functional Well-Being, and cystectomy-specific outcome measurements.
- Estimated Means were obtained from mixed effect regression models with age, gender, pathologic stage, Charlson Comorbidity Index, and BMI as covariates.



	Ileal Conduit (N=83)	Indiana Pouch (n=31)	Neobladder (N=32)	P-Value
<b>Gender</b>				
Female (%)	25 (30.1%)	10 (32.3%)	0 (0)	0.0018 <sup>1</sup>
Male (%)	58 (69.9%)	21 (67.7%)	32 (100%)	
<b>Age at Surgery (median, (IQR))</b>	74 (67-79)	62 (56-67)	62 (53.5-66)	<0.0001 <sup>2</sup>
<b>Charlson Comorbidity Index (median (IQR))</b>	28 (11-31)	8 (7-10)	10 (8-30.5)	0.0005 <sup>3</sup>
<b>Body Mass Index (median, (IQR))</b>	27.4 (24.3-33)	27.1 (24.6-32.9)	27 (24.6-33.7)	0.9855 <sup>2</sup>
<b>Path Stage at Cystectomy</b>				
pT0/pT1 (%)	29 (34.9%)	23 (74.2%)	16 (50%)	0.0055 <sup>1</sup>
pT2 (%)	19 (22.9%)	4 (12.9%)	5 (15.6%)	
pT3/T4 (%)	35 (42.2%)	4 (12.9%)	11 (34.4%)	

<sup>1</sup> p-value from chi-square test

<sup>2</sup> p-value from ANOVA

<sup>3</sup> p-value from Kruskal-Wallis test

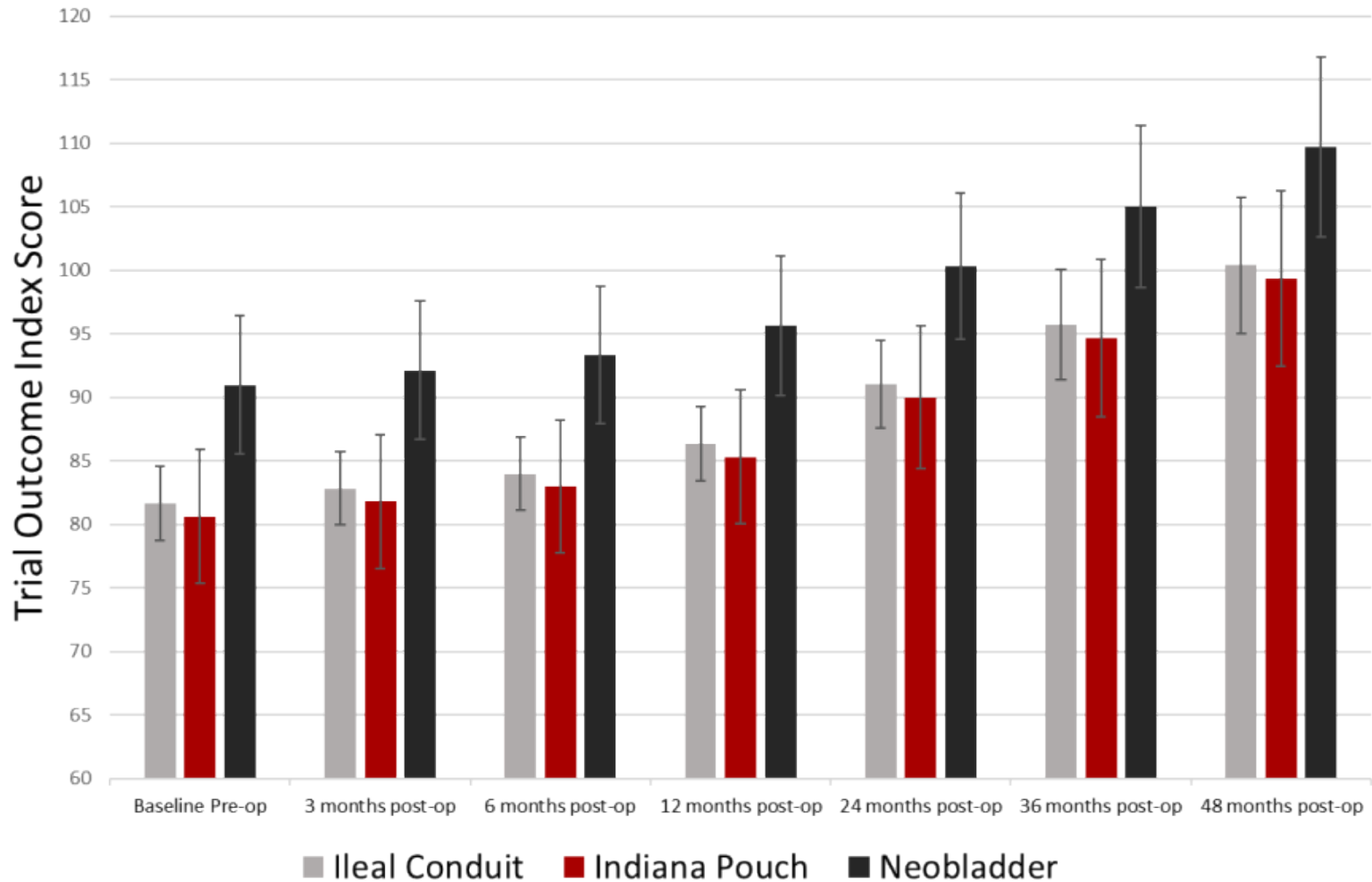


# Results

- No difference in duration of follow-up among groups
- HRQOL Scores not effected by pathologic stage or BMI
- Percent difference of the estimated mean FACT-BI-Cys Pre- and Post-Op (Mixed effect Regression model)
  - Ileal conduit 17.3%
  - Indiana Pouch 17.2%
  - Neobladder 15.56%
- TOI Scores?

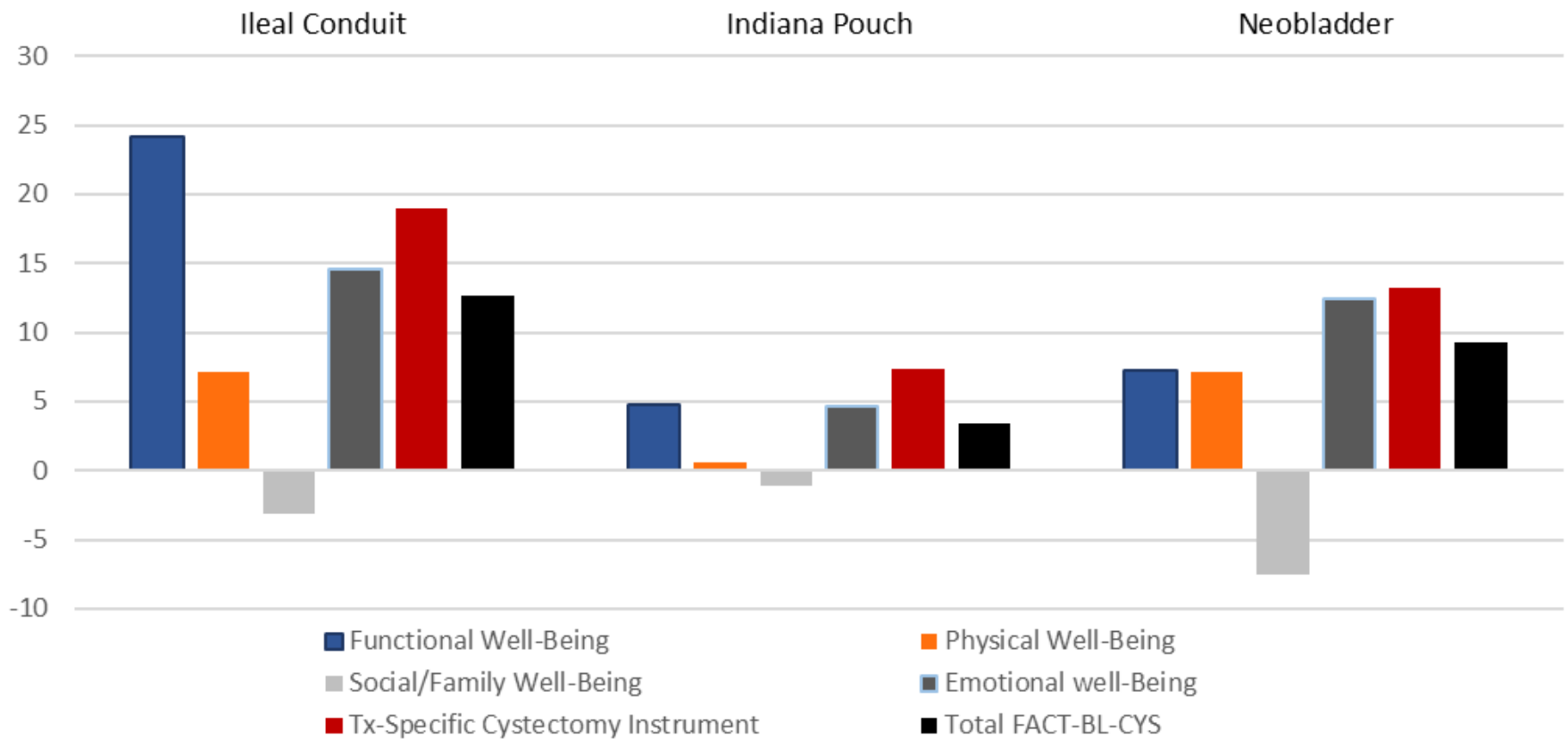


# FACT-BL-CYS Trial Outcome Index Score





## % Change in HRQOL when Follow-Up >12 months



# Results

- Continent vs non-continent urinary diversions
  - No difference in age, gender, path stage, BMI
  - Significant difference in Charlson Comorbidity Index score ( $p=0.031$ )
- No difference in TOI scores ( $p=0.43$ )
- FACT-BI-Cys ( $p=0.29$ )



# Conclusion

- Proper preoperative counseling is critical to ensure understanding of the benefits of diversion strategies.
- Similar overall improvements in HRQOL were seen in patients when followed longitudinally up to 48 months post-operatively, likely due to proper urinary diversion selection for patients.
- Although patients who received ileal conduits were older with greater comorbidities, they still appreciated an improvement in HRQOL commensurate with other patient populations undergoing radical cystectomy for bladder cancer.

