



National Institute of
Diabetes and Digestive
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POOR CLINICAL GUIDELINE ADHERENCE AND INAPPROPRIATE TESTING IN MEN WITH INCIDENT LOWER URINARY TRACT SYMPTOMS DUE TO BENIGN PROSTATIC HYPERPLASIA

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BACKGROUND

- ❖ Most LUTS/BPH studies are:
 - Single (maybe multi) center treatment response series
 - Industry funded drug studies
 - New procedural/surgical technique
 - Epidemiologic studies using incomplete or poorly representative data sets
- ❖ LUTS/BPH affects men as young as the 30s and 40s
 - Underrepresented in the above data sets

UROLOGIC DISEASES IN AMERICA

- ❖ Sponsored by National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), part of the National Institutes of Health

UDA

- ❖ Pulls from two data sources
 - Optum[©] Clinformatics[®] Data Mart (CDM)
 - Medicare 5% Sample
- ❖ Optum = private insurance men aged 40-64 from all 50 states
- ❖ Medicare = men 65 and over
- ❖ Comprehensive LUTS/BPH Cohort

METHODS AND INCLUSION

- ❖ Annual prevalence calculated by BPH related ICD9 code from 2004-2013
 - Averaged to calculate disease prevalence
 - Also calculated concomitant bladder stones, bladder cancer by ICD9 code
- ❖ Newly diagnosed men with LUTS/BPH by ICD9 related code in 2009 → disease incidence
 - No previous BPH code from 2006-08
- ❖ Testing from 2009

GUIDELINES ADHERENCE

- ❖ Our cohort was from 2009
- ❖ Testing from 2003 guidelines as we can't expect provider to follow the 2010 (or 2018 guidelines)

2003 GUIDELINES

- ❖ Recommended for all patients: **urinalysis**
- ❖ Recommended **PSA** if “at least a 10 years life expectancy and for whom knowledge of the presence of prostate cancer would change management”
- ❖ Optional and not needed before medications or WW:
PVR, uroflow
- ❖ Adjuvant and recommended before procedural options:
cysto, UDS, TRUS

RESULTS



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POPULATION SIZE

- ❖ CDM for men 40-64 years of age ($N \approx 1,650,900$ annually)
- ❖ Medicare for men ≥ 65 years of age ($N \approx 546,000$ annually)

INCIDENCE, PREVALENCE AND TESTING

LUTS/BPH prevalence, incidence, and evaluation test use among Optum® Clinformatics® Data Mart enrollees and Medicare beneficiaries*, by age, 2004-2013

Age (years)	Average annual prevalence (2004-2013)	Incidence (2009)†	Percent of incident LUTS/BPH patients with any evaluation test (2009)†
40-49	2.6	2.1	71.8
50-59	7.0	4.1	71.6
60-64	13.4	6.5	66.2
65-74	22.7	9.7	62.4
75-84	31.0	11.5	58.8
≥85	33.6	13.7	50.9

Data source: De-identified Optum® Clinformatics® Data Mart (ages 40-64) and Centers for Medicare and Medicaid Services, Medicare 5% Prescription Event File (ages 65+), 2004-2013.

† Among participants with full enrollment from January 2006 through December 2013 or the death month in death year. LUTS/BPH, lower urinary tract symptoms/benign prostatic hyperplasia.

BLADDER STONES & BLADDER CANCER

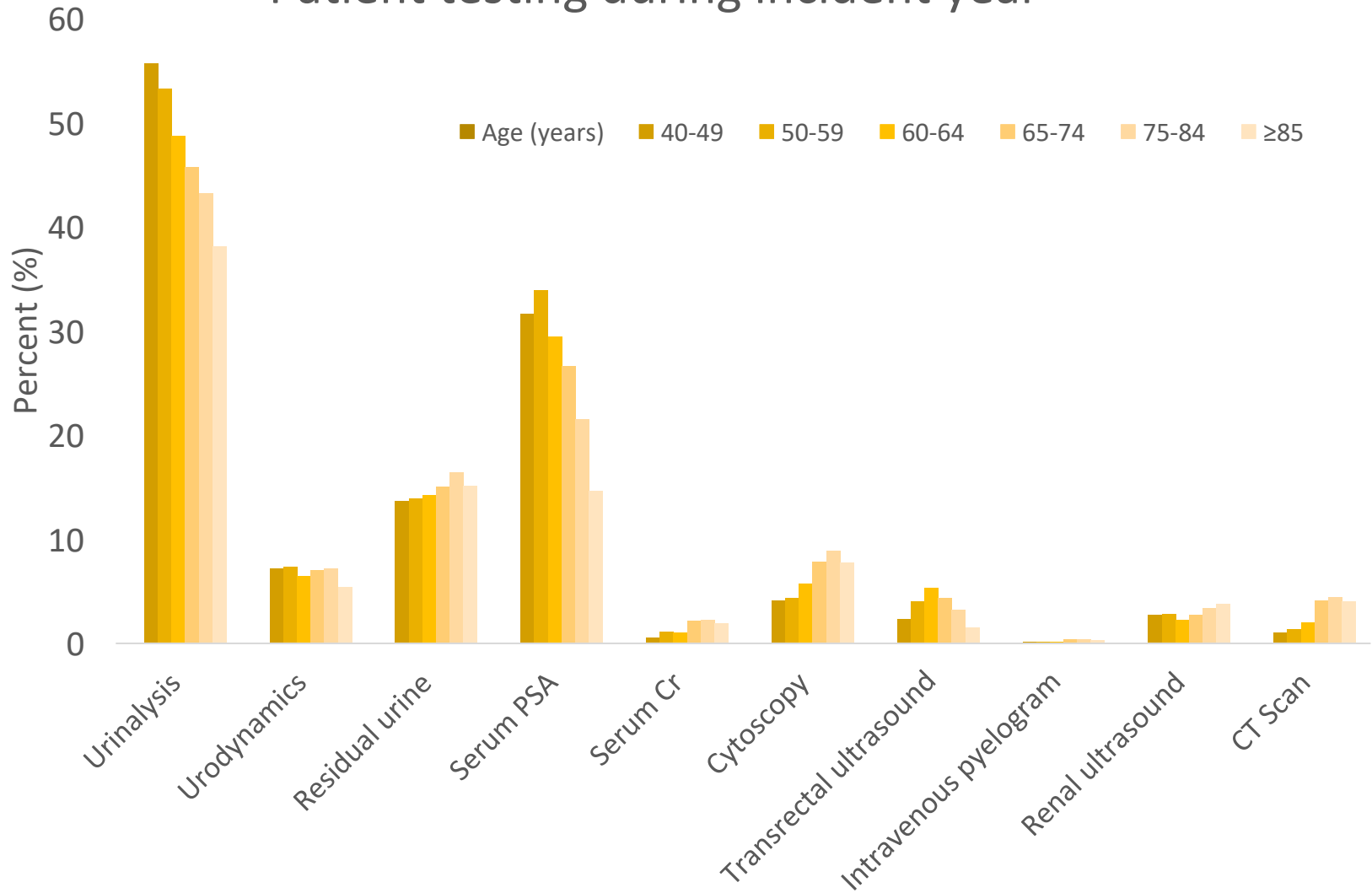
Prevalence (%) of lower urinary tract stones and bladder cancer among male Optum[®] Clinformatics[®] Data Mart enrollees and Medicare beneficiaries* with LUTS/BPH, stratified by age, 2004-2013

Age (years)	Lower urinary tract stones	Bladder cancer
40 - 44	1.5	0.4
45 - 49	1.4	0.6
50 - 54	1.4	0.8
55 - 59	1.5	1.0
60 - 64	1.7	1.5
65 - 69	1.1	1.8
70 - 74	1.2	2.3
75 - 79	1.2	2.9
80 - 84	1.3	3.5
85+	1.3	3.7

Data source: De-identified Optum[®] Clinformatics[®] Data Mart Database (ages 40-64) and Centers for Medicare and Medicaid Services, Medicare 5% Sample (ages 65+), 2006-2013.

LUTS/BPH, lower urinary tract symptoms/benign prostatic hyperplasia.

Patient testing during incident year



UNDER (AND OVER) TESTING

- ❖ Urinalysis recommendation is poorly followed
 - No reason for age variation; inverse of incidence/prevalence
 - Lower testing rates in older men may be *more dangerous* due to higher bladder cancer risk

- ❖ PSA testing:
 - *Over* testing in older men (less than 10-year life expectancy)
 - *Under* testing in young men (based on 2003 guideline statement)
 - Almost all 40 years old men have a 10-year life expectancy and a dx of prostate cancer would certainly change treatment options

CONCLUSION

- ❖ Incidence and prevalence clearly defined across essentially all age groups of men who would have LUTS/BPH
- ❖ Age related variation found and are concerning
- ❖ Under (and over) testing are evident