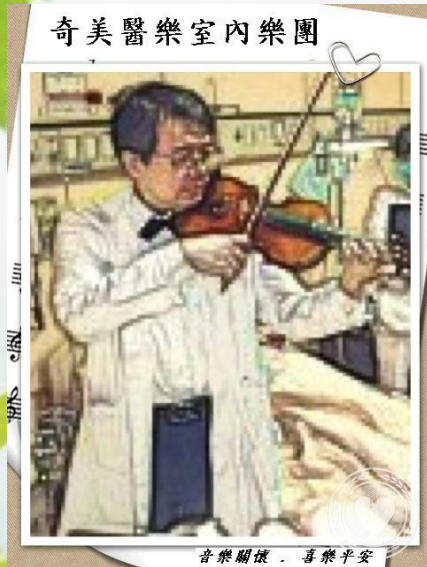


# The impact of lower urinary tract symptoms (LUTS) on healthcare



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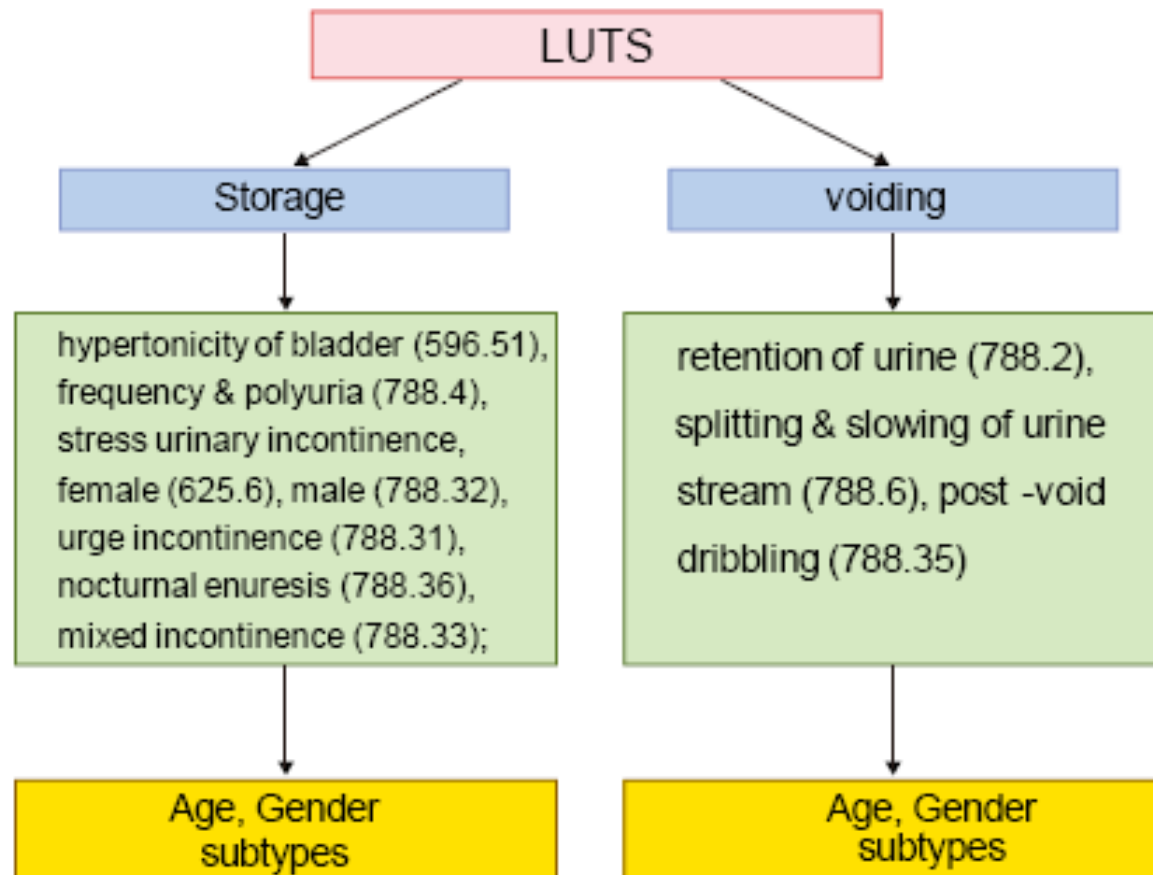
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LUTS: lower urinary tract symptoms

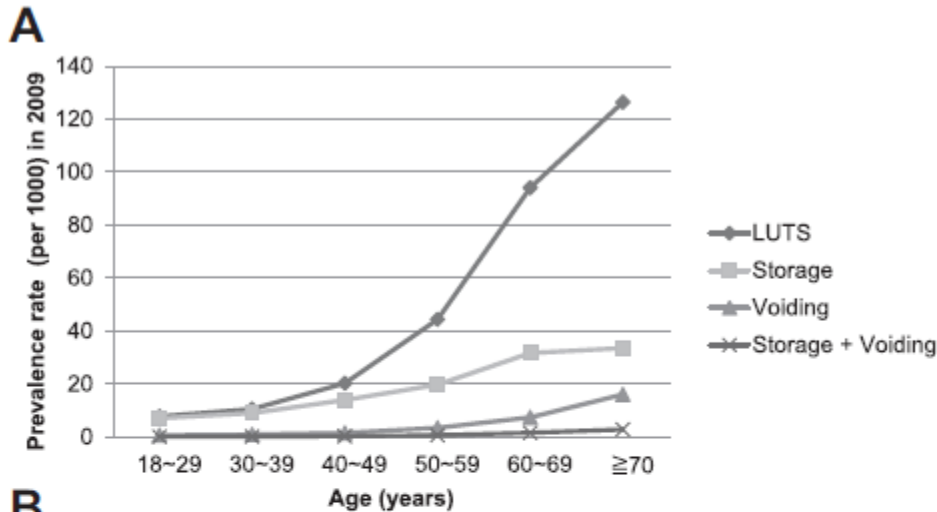


# Lower urinary tract symptoms (LUTS)

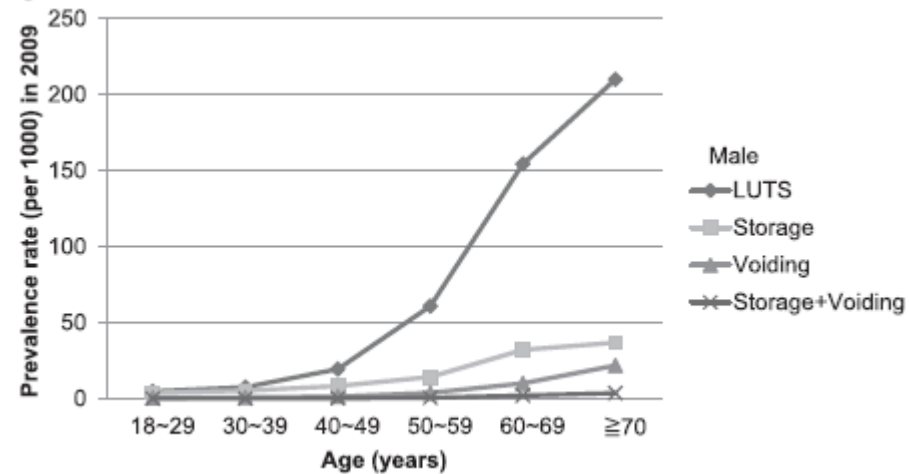
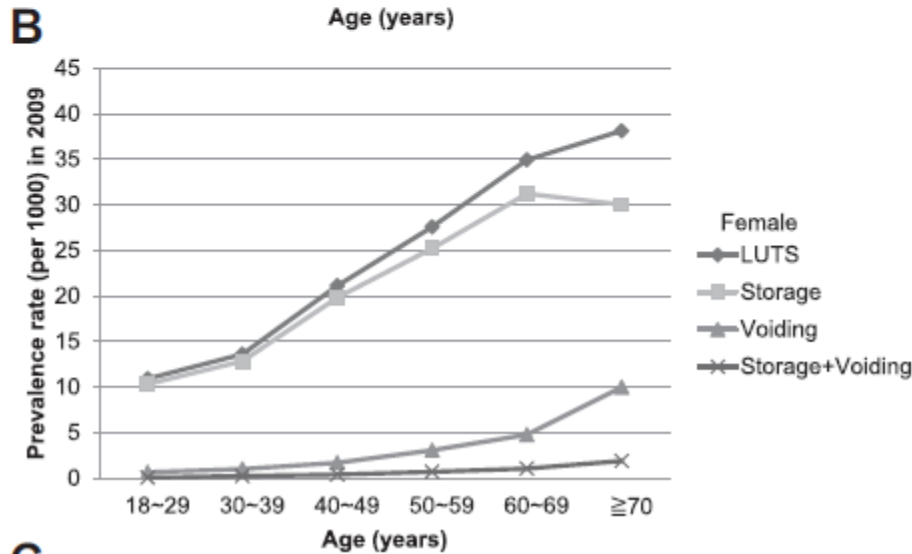
## Identified criteria:



# The healthcare-seeking prevalence of LUTS increases as age advances



LUTS: lower urinary tract symptoms



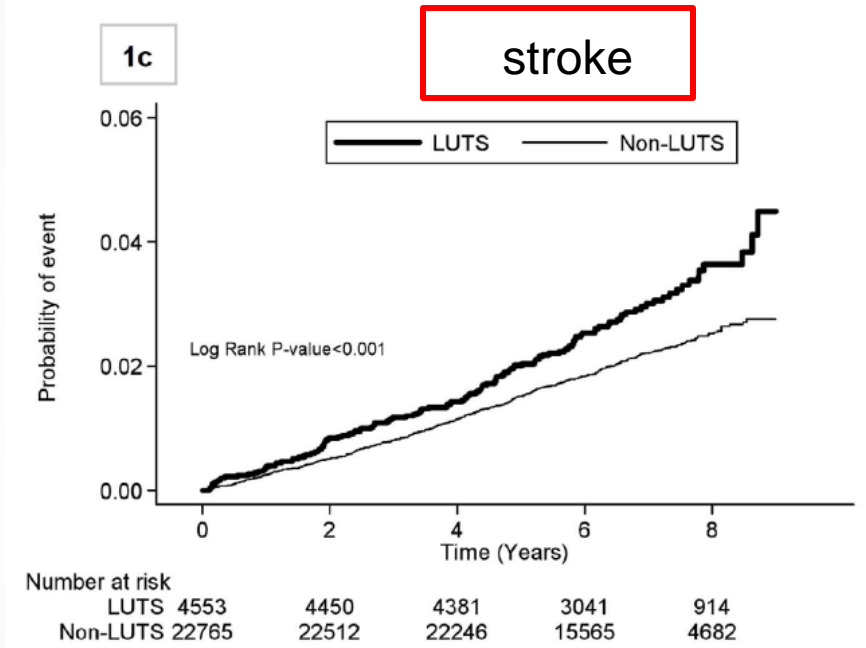
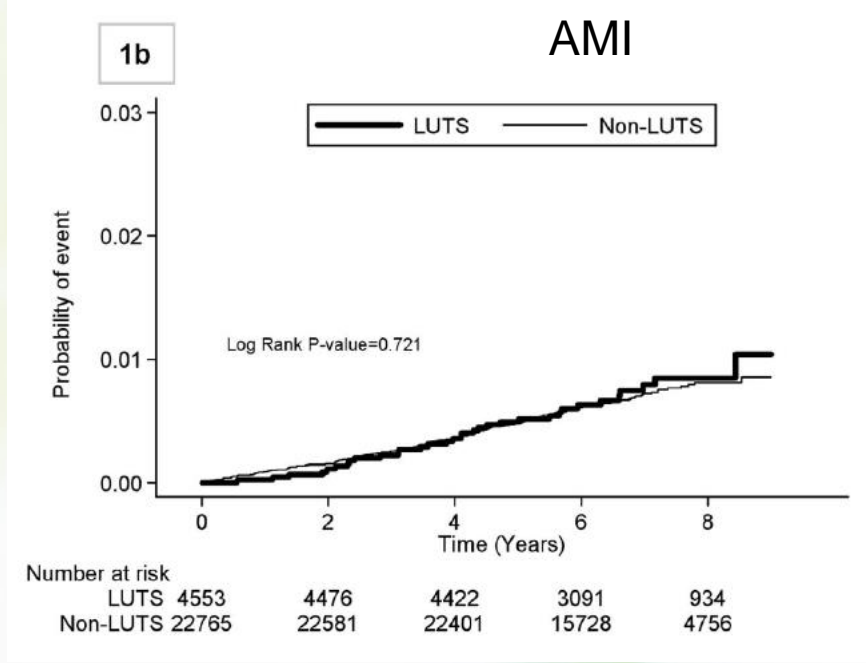
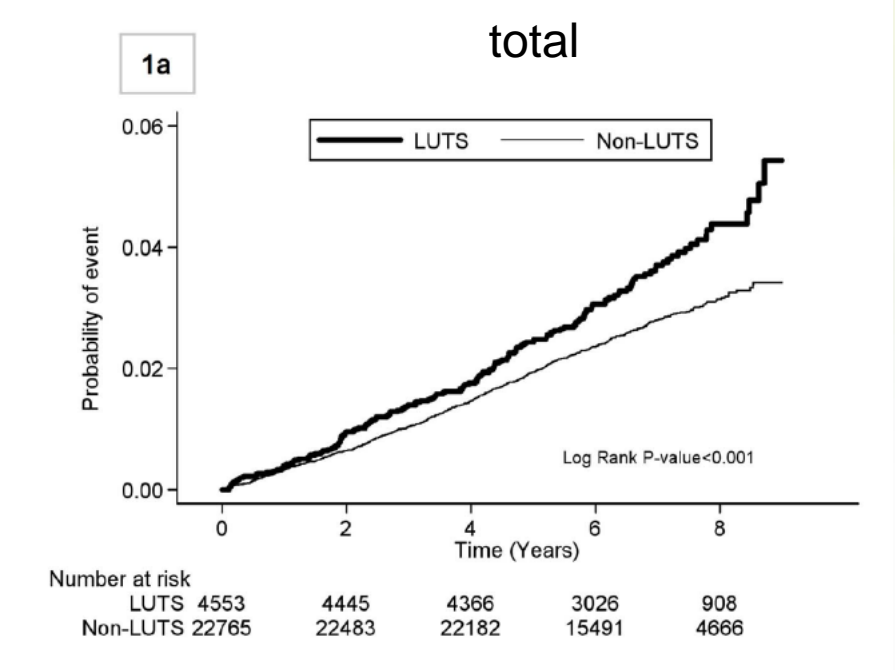
# Medical attendance for LUTS is associated with subsequent increased risk of outpatient visits

OPD	LUTS (N = 39901)		Non-LUTS (N = 39901)		Adjusted
	Visits	Rate*	Visits	Rate*	IRR*** (95%CI)
Gynecology <sup>#</sup>	96063	3.00	52810	1.64	1.82 (1.76–1.89)
Urology	33345	0.43	7417	0.09	4.51 (4.15–4.91)
Internal Medicine	441497	5.64	354377	4.51	1.25 (1.23–1.27)
GP	310219	3.96	266766	3.39	1.13 (1.10–1.16)
Chinese Medicine	220970	2.82	123436	1.57	1.77 (1.71–1.83)
Family Medicine	198575	2.54	167058	2.13	1.19 (1.15–1.22)
Ophthalmology	108055	1.38	83179	1.06	1.30 (1.27–1.34)
ENT	108113	1.38	77275	0.98	1.41 (1.36–1.46)
Surgery	77012	0.98	56024	0.71	1.38 (1.33–1.44)
Psychiatry	34573	0.44	17468	0.22	1.98 (1.80–2.17)
ER	16461	0.21	10731	0.14	1.56 (1.47–1.65)
Other	414388	5.30	314173	4.00	1.32 (1.30–1.35)
<b>Total</b>	<b>1919470</b>	<b>24.53</b>	<b>1470487</b>	<b>18.71</b>	<b>1.31 (1.29–1.32)</b>

# Medical attendance for LUTS is associated with subsequent increased risk of hospitalizations

Hospitalization Department	LUTS (N = 39901)		Non-LUTS (N = 39901)		Adjusted
	No.	IR*	No.	IR*	IRR*** (95% CI)
Gynecology#	1470	45.88	924	28.74	1.60 (1.35–1.90)
Urology	2078	26.55	380	4.83	5.50 (4.65–6.50)
Internal Medicine	13752	175.72	8896	113.17	1.55 (1.45–1.66)
Surgery	3527	45.07	2263	28.79	1.56 (1.42–1.72)
Colorectal	579	7.40	291	3.70	1.99 (1.44–2.74)
Cardiovascular	263	3.36	225	2.86	1.18 (0.88–1.57)
Thoracic	132	1.69	113	1.44	1.15 (0.72–1.86)
Gastrointestinal	211	2.70	135	1.72	1.56 (1.09–2.23)
Other surgeries	2342	29.93	1499	19.07	1.57(1.42–1.74)
Psychiatry	1377	17.60	1230	15.65	1.12 (0.75–1.67)
Orthopedics	1819	23.24	1364	17.35	1.34 (1.22–1.47)
Neurology	1153	14.73	827	10.52	1.40 (1.22–1.60)
Neurosurgery	732	9.35	551	7.01	1.34 (1.09–1.63)
Other	1997	25.52	1369	17.42	1.47 (1.31–1.65)
<b>Total</b>	<b>24357</b>	<b>311.24</b>	<b>16500</b>	<b>209.91</b>	<b>1.48 (1.40–1.58)</b>

# Risk of Hospitalization for Acute Cardiovascular Events among Subjects with LUTS



# The association of healthcare seeking behavior for anxiety and depression among patients with LUTS

	Non-LUTS (N=45,960) (%)	LUTS (N=22,980) (%)	Adjusted OR <sup>a</sup> (95% CI)
<b>Anxiety only</b>			
No	43,975 (95.68)	21,045 (91.58)	1.00 (ref.)
Yes	1985 (4.32)	1935 (8.42)	2.05 (1.92–2.19)
<b>Depression only</b>			
No	45,276 (98.51)	22,233 (96.75)	1.00 (ref.)
Yes	684 (1.49)	747 (3.25)	2.19 (1.97–2.43)
<b>Anxiety or depression</b>			
No	43,329 (94.28)	20,348 (88.55)	1.00 (ref.)
Yes	2631 (5.72)	2632 (11.45)	2.14 (2.02–2.26)
<b>Anxiety and depression</b>			
No	45,922 (99.92)	22,930 (99.78)	1.00 (ref.)
Yes	38 (0.08)	50 (0.22)	2.56 (1.67–3.91)



# LUTS are associated with increased risk of dementia among the elderly

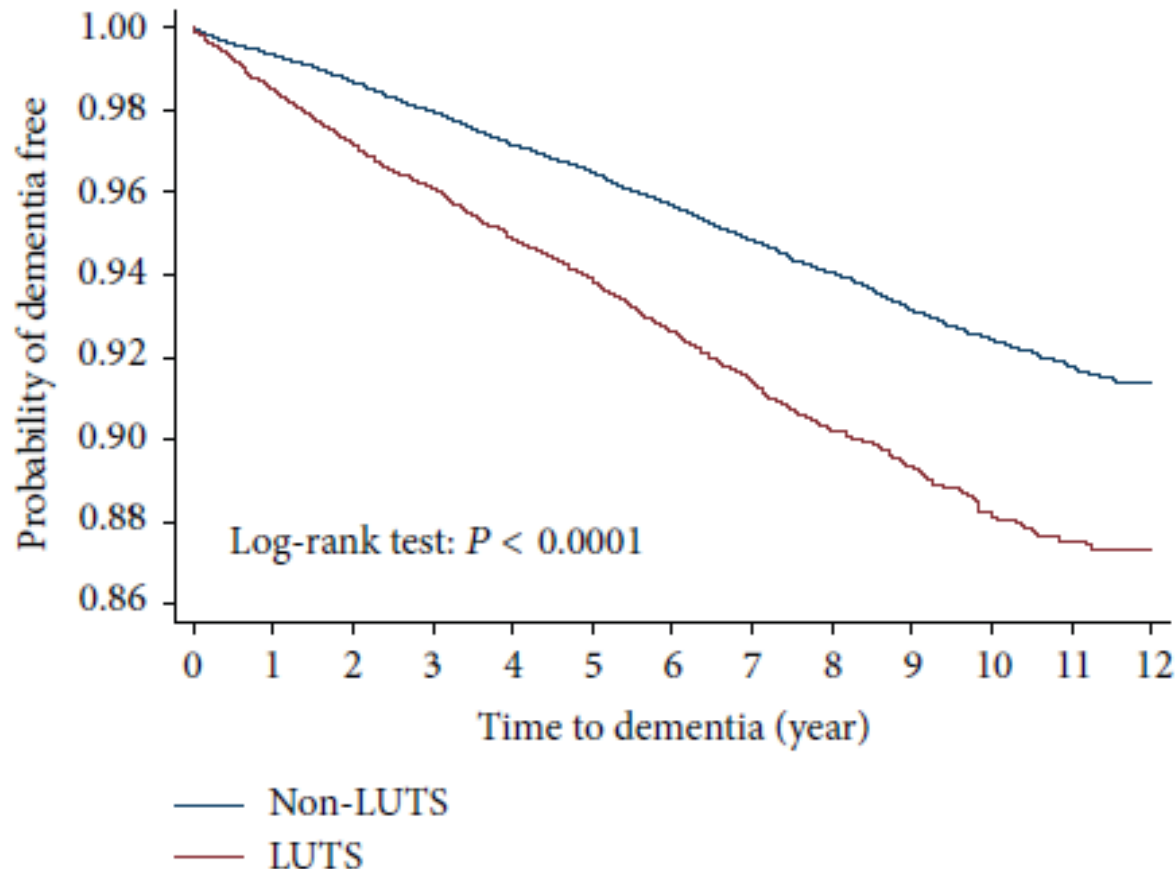


FIGURE 1: Kaplan-Meier plot for patients with dementia by lower urinary tract symptoms (LUTS).

# Lower urinary tract symptoms (LUTS)

- These studies broaden our understanding of LUTS
- LUTS impact with multiple and overlapping system
  - Instead of single organ-center (bladder and urethra)
- LUTS are precursor symptoms of some major diseases
- LUTS share some common underlying etiology with these major diseases.

