

Supplementary Materials

Table S1. International Prostate Symptom Score (IPSS) questionnaire.

	Not at all	Less than 1 time in 5	Less than half the time	About half the time	More than half the time	Almost always	Your score
1. Incomplete emptying Over the past month, how often have you had a sensation of not emptying your bladder completely after you finish urinating?	0	1	2	3	4	5	
2. Frequency Over the past month, how often have you had to urinate again less than two hours after you finished urinating?	0	1	2	3	4	5	
3. Intermittency Over the past month, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5	
4. Urgency Over the last month, how difficult have you found it to postpone urination?	0	1	2	3	4	5	
5. Weak stream Over the past month, how often have you had a weak urinary stream?	0	1	2	3	4	5	
6. Straining Over the past month, how often have you had to push or strain to begin urination?	0	1	2	3	4	5	
	None	1 time	2 times	3 times	4 times	5 times or more	Your score
7. Nocturia Over the past month, how many times did you most typically get up to urinate from the time you went to bed until the time you got up in the morning?	0	1	2	3	4	5	
	Delighted	Pleased	Mostly satisfied	Mixed: Equally satisfied / dissatisfied	Mostly dissatisfied	Unhappy	Terrible
Quality of life due to urinary symptoms If you were to spend the rest of your life with your urinary condition the way it is now, how would you feel about that?	0	1	2	3	4	5	6

Table S2. Overactive bladder symptom score (OABSS) questionnaire.

Question	Frequency	Score
1. Daytime frequency	7 or less	0
How many times do you typically urinate from waking in the morning until sleeping at night?	8 to 14	1
	15 or more	2
2. Nighttime frequency	0	0
How many times do you typically wake up to urinate from sleeping at night until waking in the morning?	1	1
	2	2
	3 or more	3
3. Urgency	Not at all	0
How often do you have a sudden desire to urinate, which is difficult to defer?	Less than once a week	1
	Once a week or more	2
	About once a day	3
	2 to 4 times a day	4
	5 times a day or more	5
4. Urgency incontinence	Not at all	0
How often do you leak urine, because you cannot defer the sudden desire to urinate?	Less than once a week	1
	Once a week or more	2
	About once a day	3
	2 to 4 times a day	4
	5 times a day or more	5

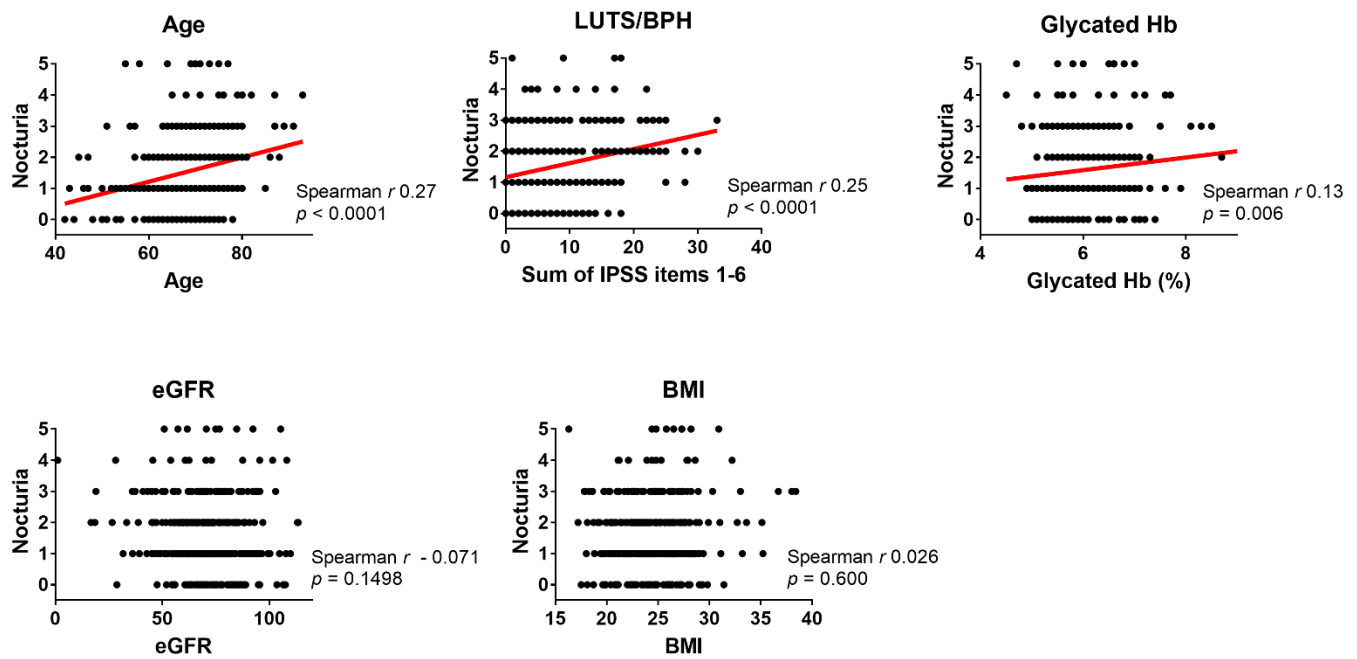


Figure S1. Correlations between nocturia and other covariates. Correlations between nocturia episodes and other covariates, including age, the sum of IPSS scores on items 1–6, glycated hemoglobin, eGFR, and BMI, are shown. LUTS: lower urinary tract symptoms, Hb: hemoglobin, eGFR: estimated glomerular filtration ratio, BMI: body mass index.

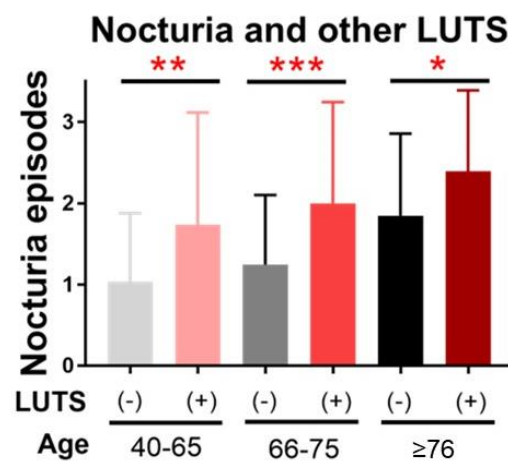


Figure S2. Patients with LUTS other than nocturia experienced more nocturia episodes in each age group. LUTS: lower urinary tract symptoms. LUTS (+) means that the sum of IPSS items 1–6 was more than 6. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.