

# The efficacy of mirabegron additional therapy for elderly male lower urinary tract symptoms after treatment with $\alpha$ 1-adrenergic receptor blocker

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<b>Registration date</b> 08/07/2016	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 30/11/2020	<b>Condition category</b> Urological and Genital Diseases	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Overactive bladder syndrome (OAB) is a common condition with symptoms such as an urgent feeling to go to the toilet, going to the toilet often and sometimes leaking urine before getting to a toilet. Bladder training often cures the problem and sometimes medication is given at the same time. Mirabegron is a  $\beta$ 3-adrenoreceptor agonist developed for treatment of overactive bladder.  $\alpha$ 1-Adrenergic receptor blockers work well for lower urinary tract symptoms (LUTS) in male patients. However, it is not known how well mirabegron treatment in elderly male patients with persistent male LUTS performs, especially in OAB after monotherapy (therapy with a single drug) with  $\alpha$ 1-adrenergic blockers. The aim of this study is to clarify the efficacy of mirabegron as an additional treatment for male elderly patients with LUTS.

### Who can participate?

Men aged at least 65 with LUTS

### What does the study involve?

Participants have their usual treatment for LUTS but are also given 50g of mirabegron daily for 12 weeks. Treatment is assessed by seeing whether OAB symptoms improve.

### What are the possible benefits and risks of participating?

It is expected that participants will benefit from improvement of their overactive bladder symptoms. The risk of participating is minimal, but some people may find it painful to urinate (side effect of mirabegron)

### Where is the study run from?

Department of Urology and Renal Transplantation, Nagasaki University Hospital (Japan)

### When is the study starting and how long is it expected to run for?

January 2012 to March 2015

Who is funding the study?  
Nagasaki University Hospital (Japan)

Who is the main contact?  
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## Contact information

**Type(s)**  
Scientific

**Contact name**  
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## Additional identifiers

**Protocol serial number**  
N/A

## Study information

**Scientific Title**  
The efficacy of mirabegron additional therapy for lower urinary tract symptoms after treatment with  $\alpha$ 1-adrenergic receptor blocker monotherapy: prospective analysis of elderly men

**Study objectives**  
The efficacy of mirabegron additional treatment in elderly male patients with persistent male lower urinary tract symptoms (LUTS), especially overactive bladder (OAB) symptoms after monotherapy with  $\alpha$ 1-adrenergic blockers, is not fully understood. Hence, the aim of study is to clarify it.

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
Nagasaki University Hospital Ethical Committee, 17/11/2011, ref: 11120267

**Study design**  
Interventional non-randomized single site study

## Primary study design

Interventional

## Study type(s)

Treatment

## Health condition(s) or problem(s) studied

Persistent male lower urinary tract symptoms (LUTS) and overactive bladder (OAB) symptoms

## Interventions

The patients continued all of their prescribed drugs during this study period. Before and 12 weeks after mirabegron (Betanis®, Astellas Pharma Inc., Tokyo, Japan; 50 mg once daily) treatment was added to a previous  $\alpha$ 1-adrenergic receptor blocker for urinary symptoms, efficacy of the treatment was evaluated using the OABSS and International Prostate Symptom Score (IPSS) to assess subjective symptoms, and uroflowmetry and PVR was used to assess objective symptoms. We measured the maximum flow rate ( $Q_{max}$ ) on free uroflowmetry and PVR using transabdominal ultrasound sonography. Moreover, before mirabegron add-on treatment was administered, the prostate volume (PV) was evaluated using transabdominal ultrasound sonography. During the clinical study, the current  $\alpha$ 1-adrenergic receptor blocker that the patients had been taking orally was not changed to a different one.

## Intervention Type

Drug

## Phase

Not Applicable

## Drug/device/biological/vaccine name(s)

Mirabegron

## Primary outcome(s)

1. The change of total overactive bladder symptom score
2. The change of total international prostate symptom score
3. Voided volume
4. Maximum flow rate
5. Post void residual urine volume

Measured at between baseline and 12-weeks after treatment

## Key secondary outcome(s)

1. The subscore of overactive bladder score
2. The subscore of international prostate symptom score

Measured at between baseline and 12-weeks after treatment

## Completion date

31/03/2015

## Eligibility

**Key inclusion criteria**

1. Male patients who had persistent lower urinary tract symptom and particularly overactive bladder symptoms, and had been taking a regular dose of  $\alpha$ 1-adrenergic receptor blockers for more than 12 weeks.
2. 65 years or older
3. total overactive bladder symptom score of 3 or more points with urinary urgency at least once per week

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Senior

**Sex**

Male

**Total final enrolment**

50

**Key exclusion criteria**

1. Post void urine volume of 50 mL
2. History of urinary retention
3. Prior diagnosis of neurogenic bladder
4. Urethral stricture
5. Severe hypertension (systolic blood pressure  $\geq$  180 mmHg and/or diastolic blood pressure  $\geq$  110 mmHg) not well controlled by medication
6. Renal insufficiency (glomerular filtration rate  $<$  30 mL/min/1.73 m<sup>2</sup>)
7. Liver impairment
8. Intention to have a child
9. Urological malignancy
10. Patients taking any anti-muscarinic drugs

**Date of first enrolment**

21/01/2012

**Date of final enrolment**

30/04/2015

**Locations****Countries of recruitment**

Japan

**Study participating centre**

**Department of Urology and Renal Transplantation, Nagasaki University Hospital**  
1-7-1 Sakamoto  
Nagasaki City  
Nagasaki  
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852-8501

## Sponsor information

### Organisation

Department of Urology and Renal Transplantation, Nagasaki University Hospital

### ROR

<https://ror.org/058h74p94>

## Funder(s)

### Funder type

Hospital/treatment centre

### Funder Name

Nagasaki University Hospital

## Results and Publications

### Individual participant data (IPD) sharing plan

### IPD sharing plan summary

Data sharing statement to be made available at a later date

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	29/07/2016	30/11/2020	Yes	No