

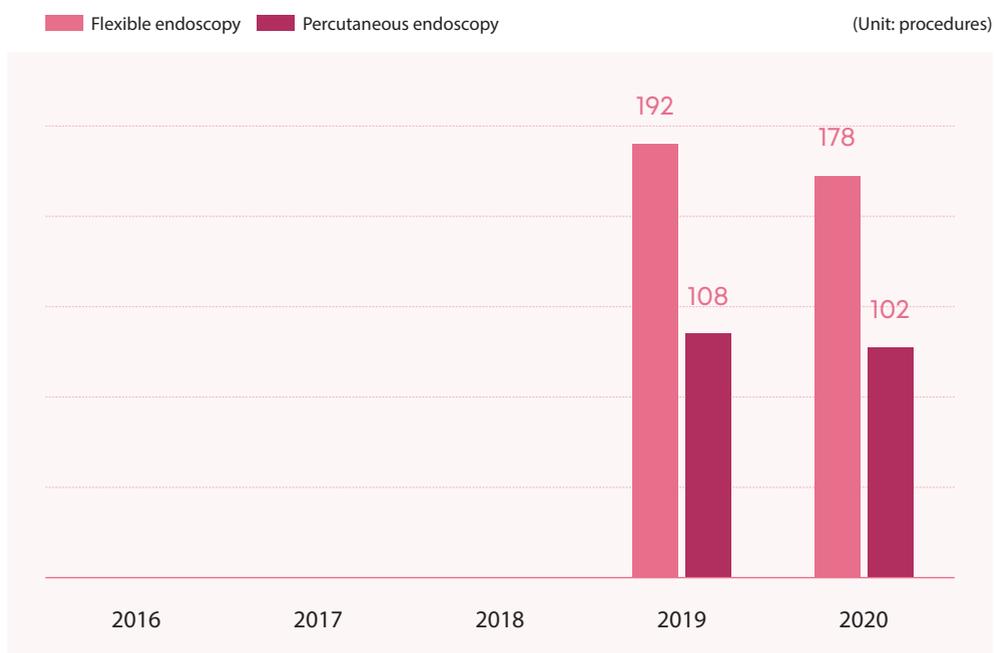
# Urinary Stones

# 1

## Annual number of endoscopic surgery of complicated renal stones

**Index definition** Annual number of endoscopic surgeries of complicated and severe renal stones

**Description** Large calculus of over 1cm from multiple renal stones (including bilateral stones), anatomical variation, patients referred from other hospitals due to difficult operation, stones that occurred after abdominal surgery affecting the urinary tract such as bladder cancer, and operation of pediatric calculus.



**Calculation Numerator** Renal stones with a maximum longitudinal length or the total maximum length over 1cm and that fall under any of the following:  
 ① staghorn calculus ② anatomical variation  
 ③ patients referred from other hospitals due to difficult operation  
 ④ stones that occurred after abdominal surgery affecting the urinary tract such as bladder cancer ⑤ pediatric calculus

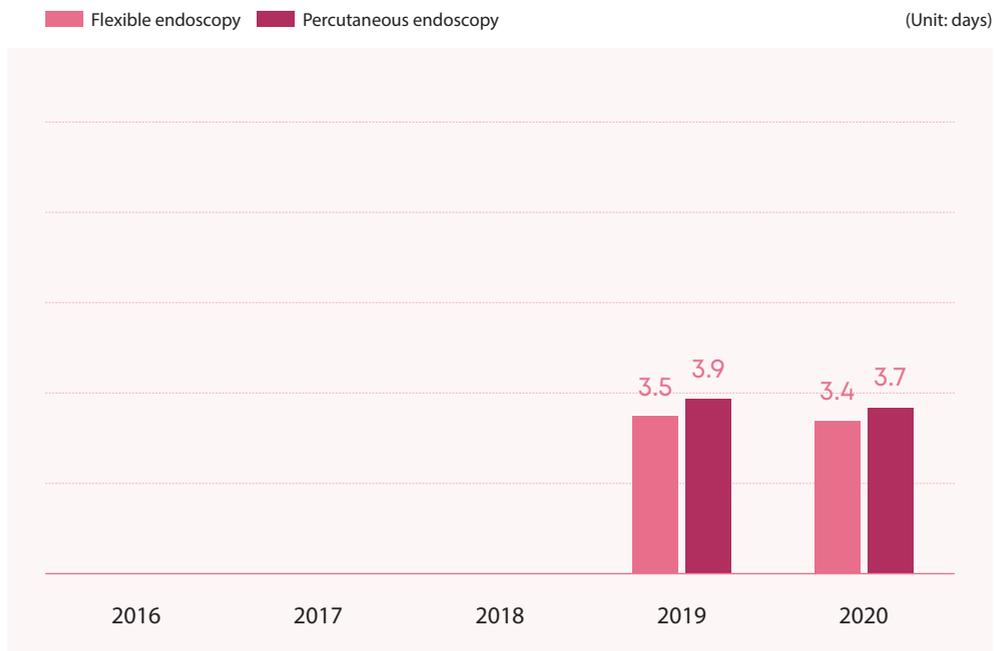
**Exclusion Numerator** Reason for a referral from another hospital is due to absence of endoscopy or a surgeon or high difficulty of the operation

## 2

# Postoperative hospitalization days of complicated renal stones

**Index definition** Hospitalization days after operation of complicated and severe renal stones

**Description** Depending on the severity of the patient's status, the proportion of reoperation and unscheduled staged operations and the probability of treatment by antibiotics and blood transfusion with increased hospital stay.



### Calculation

**Numerator** Total hospitalization days for the operation of complicated renal stones  
**Denominator** Number of complicated renal stones operations (max. longitudinal length or the total max. longitudinal length is over 1cm)

# 3

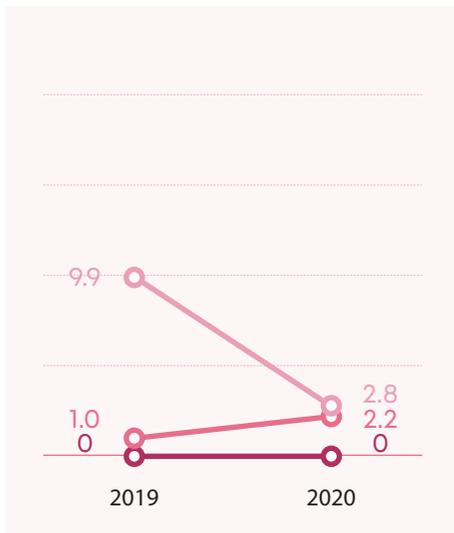
## Crude incidence rate of postoperative 30-days in-hospital complications of complicated renal stones

**Index definition** Incidence rate of complications within 30 days after the operation for complicated and severe renal stones

**Description** Depending on the severity of the patient, complications have increased such as hemorrhage and infection. Indexes of blood transfusion with controlled bleeding, antibiotics administration for several weeks (mild), embolization with controlled bleeding (moderate), nephrectomy, or death (severe) are reflected.

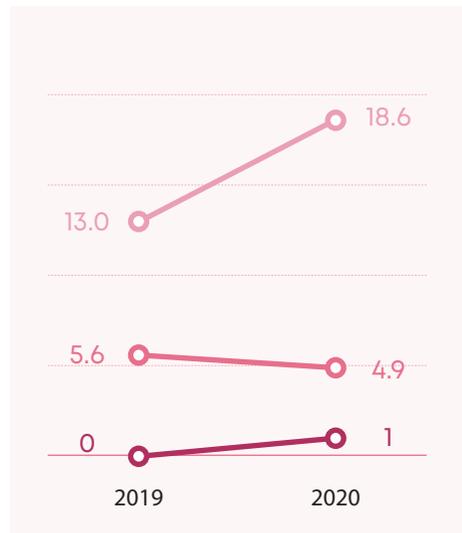
### Flexible endoscopy

○ Mild ○ Moderate ○ Severe  
(Unit: %)



### Percutaneous endoscopy

○ Mild ○ Moderate ○ Severe  
(Unit: %)



**Calculation**

**Numerator** Patients who had complications as below within 30 days from the operation and who were treated at SNUH

- ① Continuous administration of antibiotics due to urinary tract infection
- ② Blood transfusion ③ Reoperation and staged operation (above mild)
- ④ Treatment at the ICU ⑤ Embolization (above moderate)
- ⑥ Nephrectomy ⑦ Death (above severe)

**Denominator** Number of complicated renal stones operations (max. longitudinal length or the total max. longitudinal length is over 1cm)

**Exclusion**

**Numerator** Patients with complications who were not treated at SNUH