

P-79

INCIDENCE AND SHORT-TERM MORTALITY OF PATIENTS WITH TRAUMATIC INJURY ACCORDING TO INJURY SEVERITY



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BACKGROUND

Although traumatic injury is the leading cause of death worldwide, there is a lack of research on the overall incidence and short-term mortality of traumatic injury in Korea.

OBJECTIVES

This study investigated an overall incidence of traumatic injury and short-term mortality following traumatic injury according to injury severity using nationwide claims data.

METHODS & MATERIALS

- Data:** National Health Insurance Service database
- Injury severity:** Excess Mortality Ratio-adjusted Injury Severity Score (EMR-ISS).
- Study population:**
 - Inpatients from 2008 to 2022 diagnosed with S or T codes from the International Classification of Diseases, 10th revision were included.
 - Patients with a history of traumatic injuries between 2008 and 2012 were excluded.
 - Patient with mild (EMR-ISS ≤ 8) injury were also exclude
 - Finally, a total of 4,137,479 patients with moderate-to-severe injury were included as study population
- Statistical analysis:**
 - Age- and sex-adjusted incidence: direct standardization by applying 2010 Korean population as a standard population.
 - Annual percentage changes (APC): Joinpoint regression analysis

RESULTS

Figure 1. Age- and sex-adjusted incidence of patients with traumatic injury according to injury severity

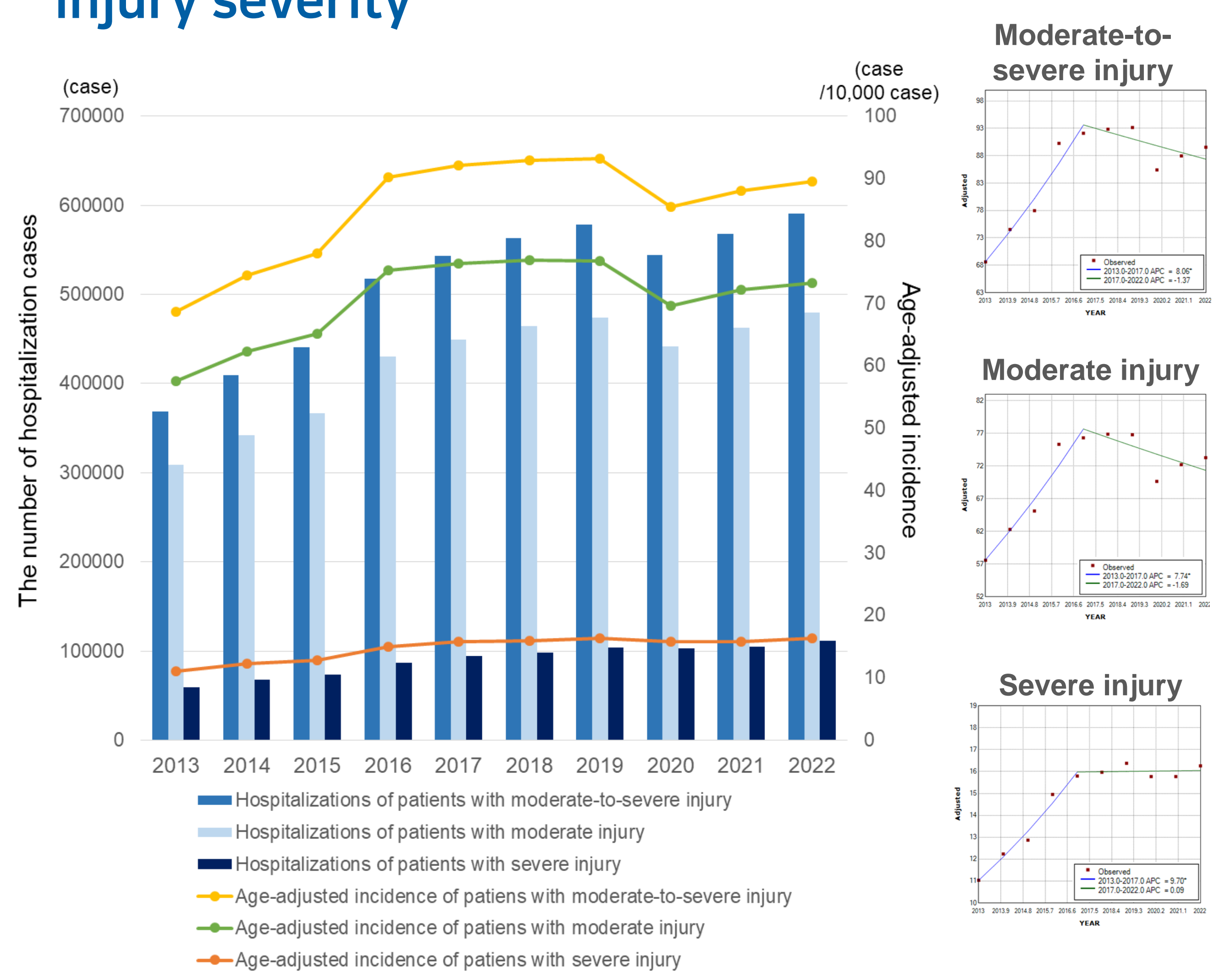


Figure 2. Age-specific incidence of patients with traumatic injury according to injury severity

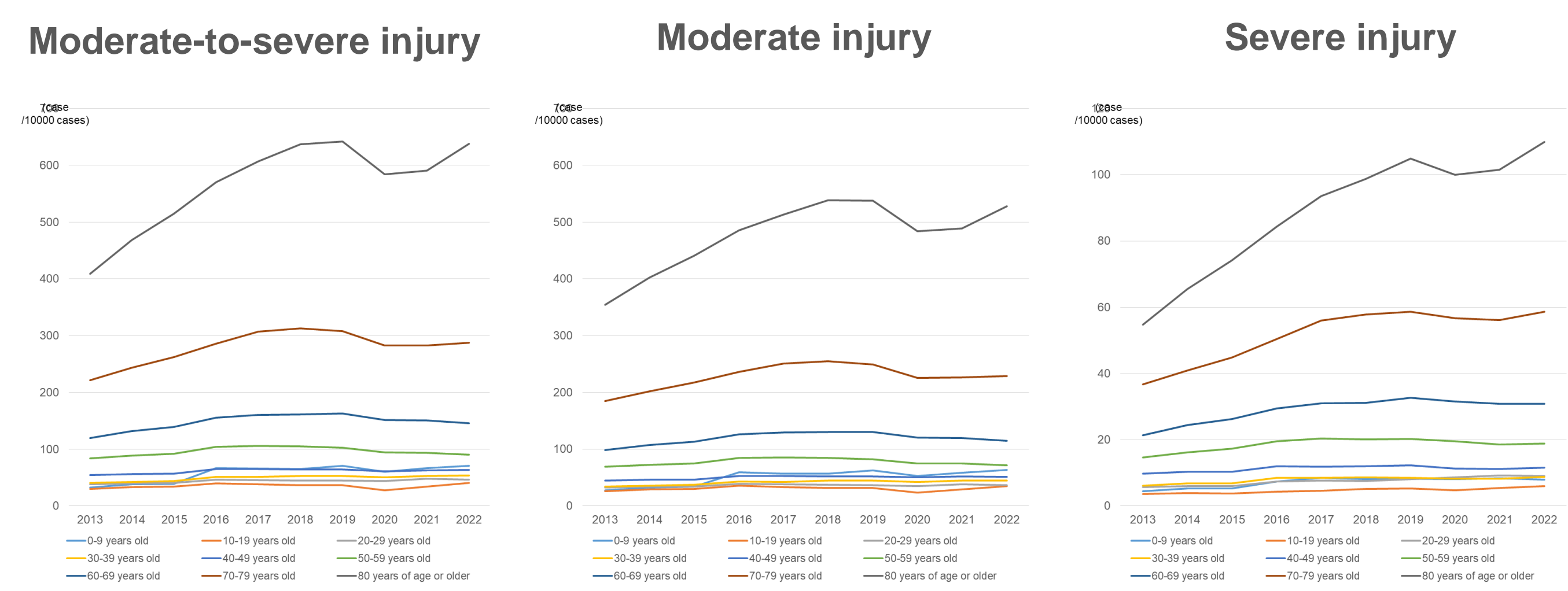


Figure 3. Short-term mortality within 2, 7, and 30 days of injury for patients with traumatic injury

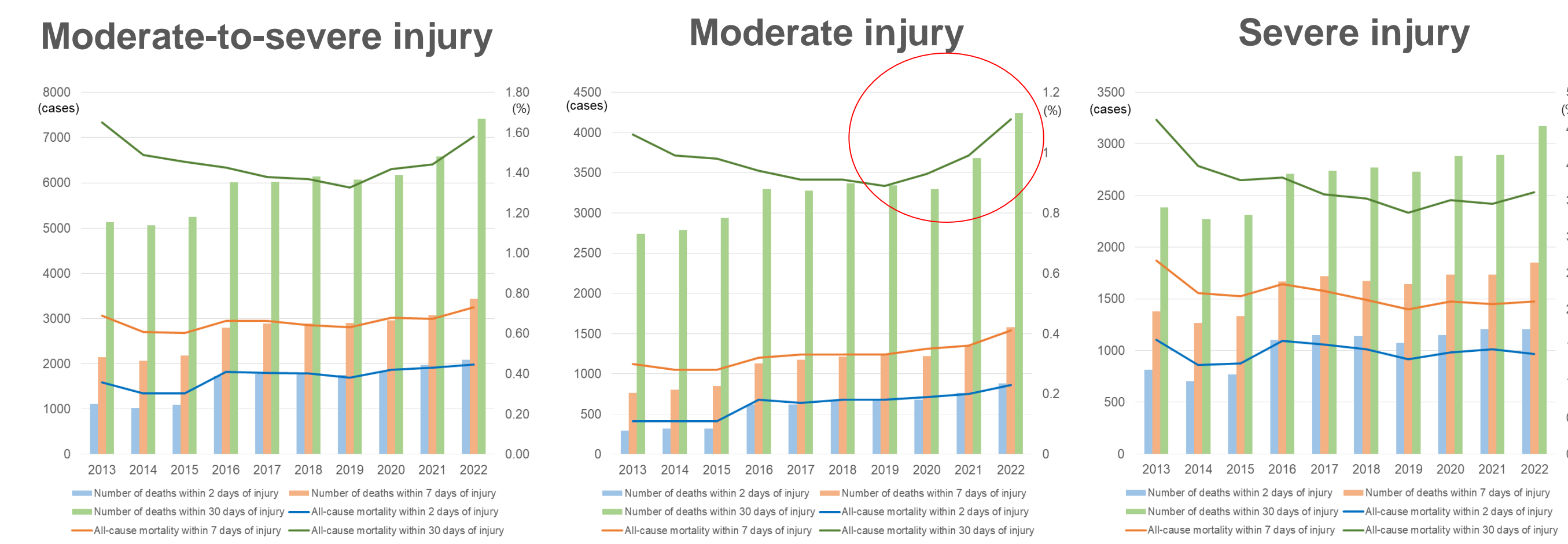
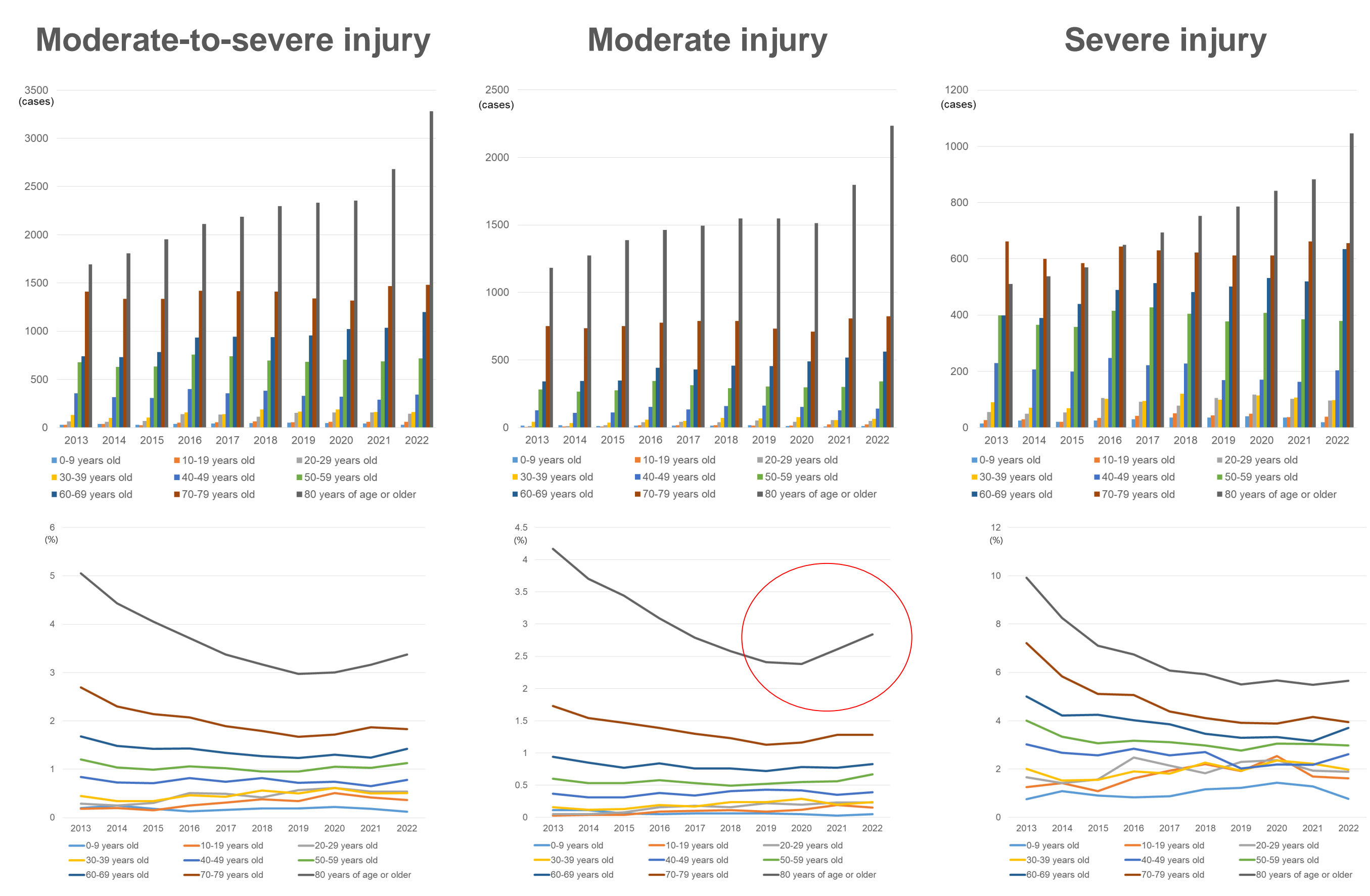


Figure 4. Age-specific mortality within 30 days of injury for patients with traumatic injury



SUMMARY

- **The incidence** of traumatic injury tends to **increase from 2013 to 2017**, regardless of injury severity, then significance disappeared after 2017.
- **Age-specific incidence** were highest in the late older age group, **80 years and older**.
- For patients with **moderate injury**, **mortality** within 30 days of injury decreased significantly from 2013 to 2019, while **increased from 2019 to 2022**.
- **Mortality** within 30 days of traumatic injury were highest among those **aged 80 and older**, with **moderate injury** mortality **increasing since 2019**.
- This finding suggests that the **global pandemic since 2019** may have affected post-traumatic mortality in late older adults.
- Therefore, there is a need to identify factors that associated with post-traumatic mortality and to **prevent short-term mortality in late older adults**.

Acknowledgments: This study was supported by grant from the Ministry of Land, Infrastructure and Transport (MOLIT) Research Fund (NTRH RF-2024001)

* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level