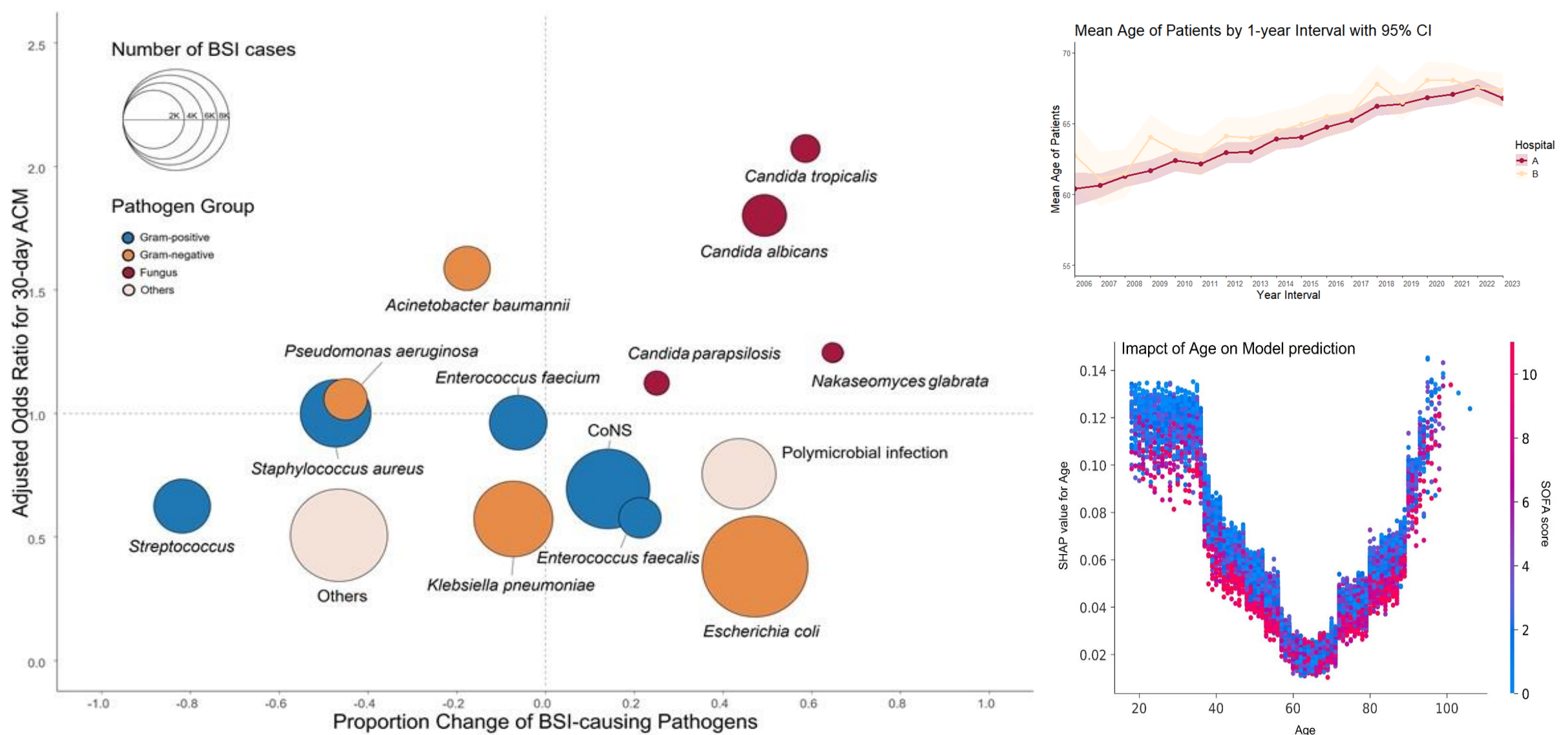


Impact of Population Ageing on Pathogen Distribution and Clinical Outcomes in Bloodstream Infections: A 17-Year Retrospective Cohort Study in South Korea

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Background

- Global ageing → unclear impact on BSI epidemiology & prognosis
- Aim: assess age-related pathogen shifts & 30-day mortality

Methods

- 37,100 BSI cases (2006–2023, 2 tertiary hospitals, South Korea)
- Statistical model & machine learning approaches

Results

- Older age → higher 30-day mortality (mediated by pathogen distribution)
- Increasing with ageing: *E. coli*, *E. faecalis*, CoNS, *Candida* spp.
- Decreasing with ageing: *S. aureus*, *Streptococcus* spp., *P. aeruginosa*, *Acinetobacter* spp.
- Fungemia showed the highest adjusted mortality.
- The survival advantage of *E. coli*-BSI was lost in strains resistant to 3rd generation cephalosporin resistant.

Conclusion

- Ageing → major shifts in BSI pathogens & outcomes
- Call for age-tailored antimicrobial stewardship & infection control