

The impact of COVID-19 pandemic on H. influenzae disease in one community hospital

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RES-233

Background:

H. influenzae (HI) are important pathogens between toddler and elderly patients. Our hospital works as a community one and takes care of elderly and immunocompromised patients. During the year of 2019 and 2024, the epidemics of COVID-19 infection are rise and flow all over the world. It maybe change the pattern of disease and ecology of bacteria from hospitalized patients. So, we want to investigate the trend and change of these phenomenon.

Methods:

From Datong Collaboration System, we can obtain the HI patients from positive culture of clinical specimens during 2019 and 2024. At the same time, we seek whether other accompanying bacteria or not. Then, we collect the demographic and outcome of these patients. Finally, we would compare the impact of COVID-19 during these years.

Results:

1. During the six years, there are 846 HI infection (94, 126, 157, 182, 166, 121) included. The infection sites are more at sputum (89.2%) and then BAL (7.7%), blood (3.1%).

2. The distribution of incubation time of HI are more at 2 days to 6 days (84.3%).

3. Male to female is 1.6 to 1. The disparity are biggest on 2021 (2.1 to 1) and smallest on 2019, 2023 (1.2 to 1).

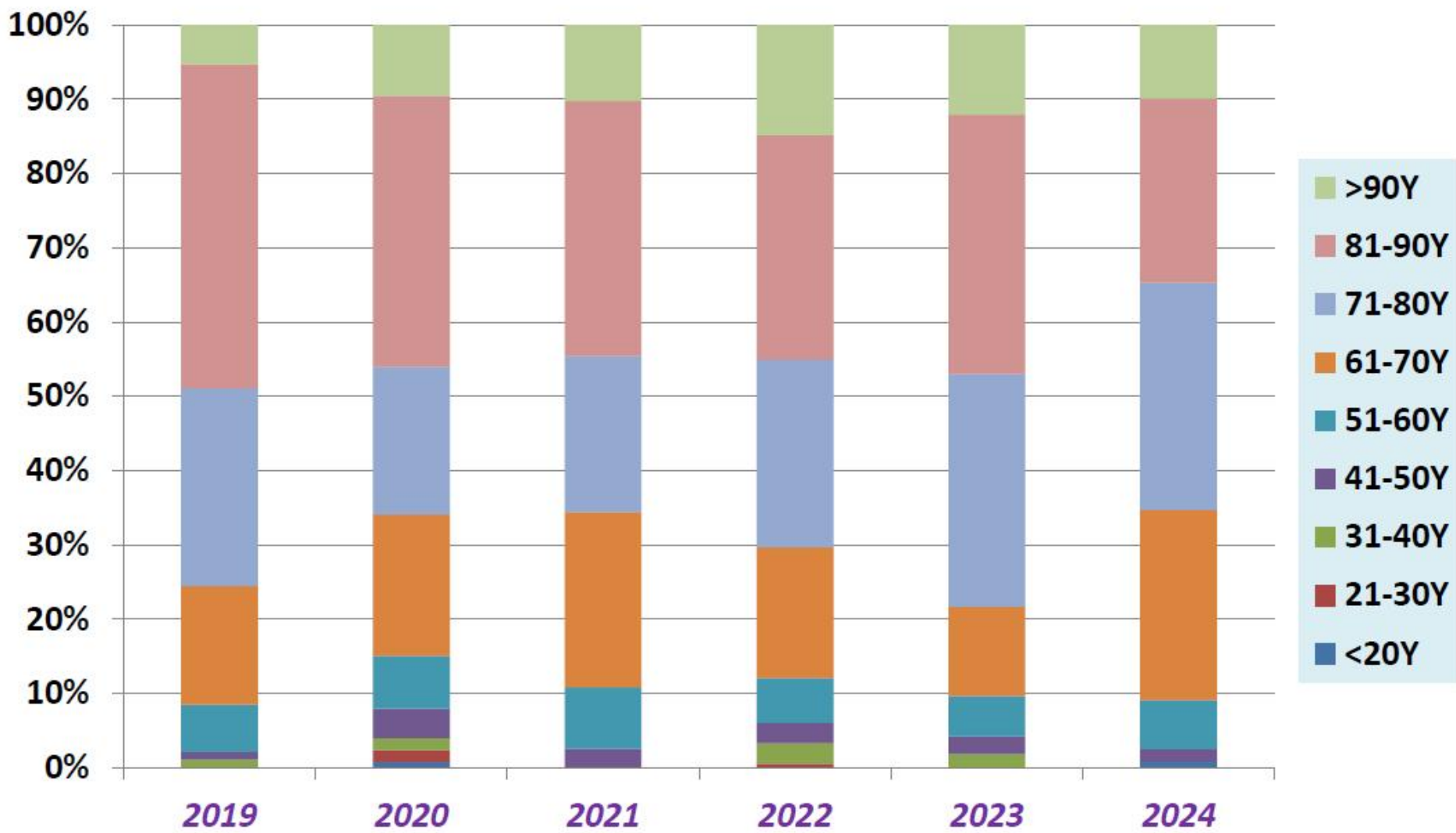
4. The distribution of age are more at elderly (>65y/o, 86%) and more at the period of 70-80 and 80-90y/o.

5. The outcome of these patients are maybe discharge (65.7%), died (29.2%), hospitalized (2.6%) and others (2.5%).

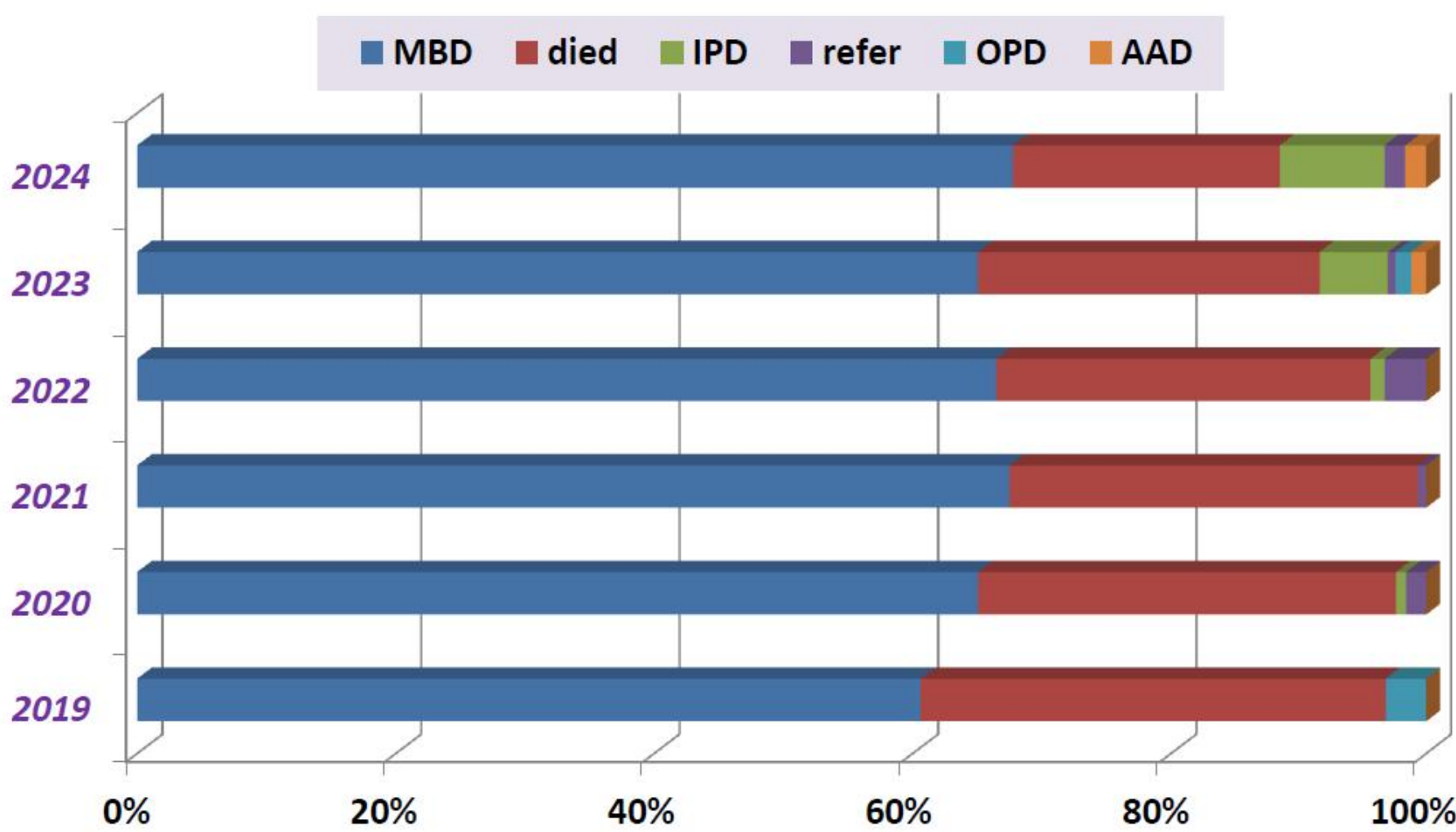
6. There are 411 (48.6%) HI patients with accompanying bacteria. They are P. aeruginosa (174), A. baumannii (69), K. pneumoniae (42), S. aureus (42), E. coli (31), GGS (30), P. aeruginosa (27), S. marscens (16), P. mirabilis (13) and others (39).

7. Besides the year of 2019, elderly has higher mortality rate than non-elderly (31.6% vs 18.4%). The mortality rate of male are higher than female on the year of 2019, 2020, 2024.

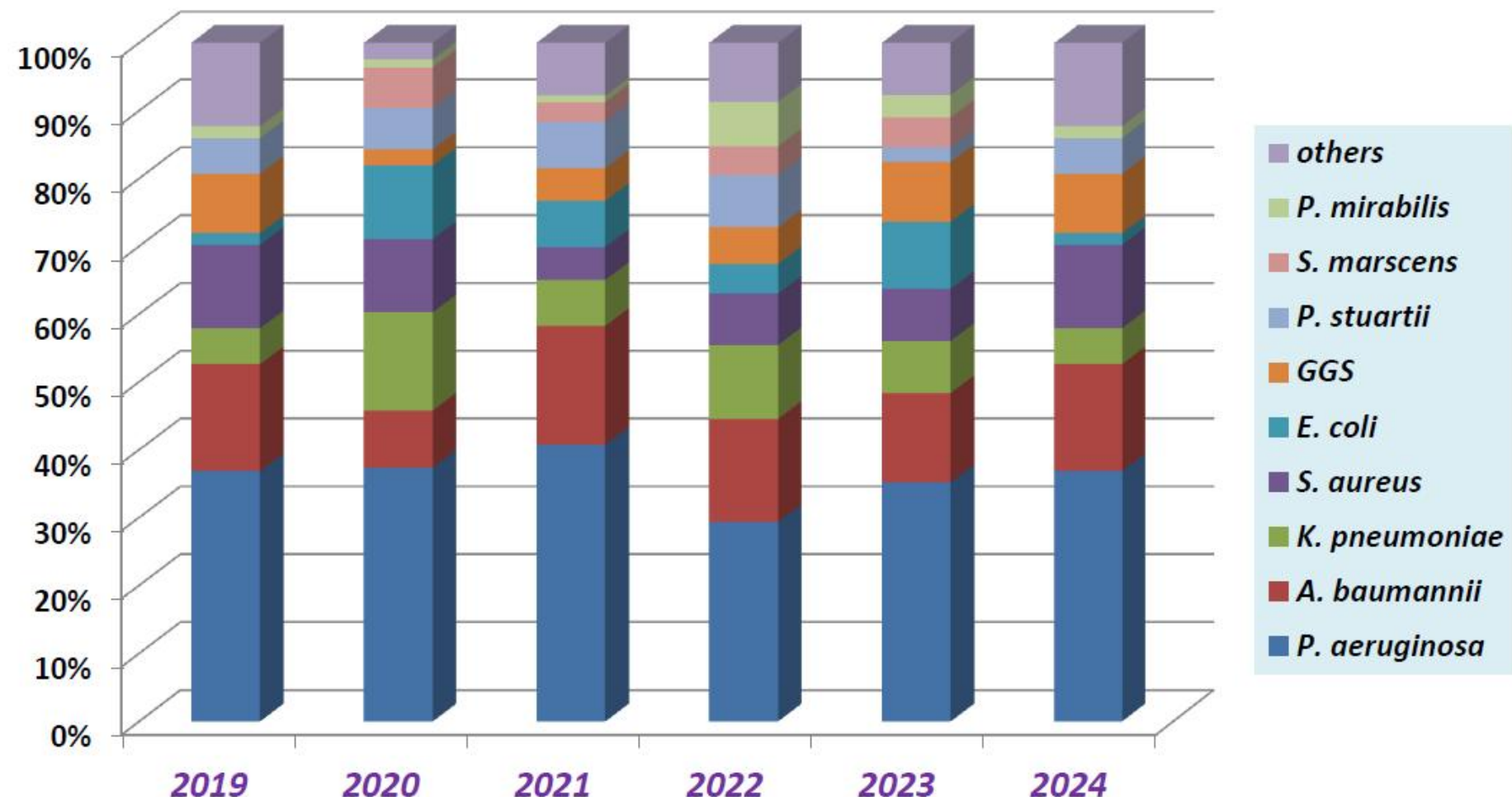
Distribution of age



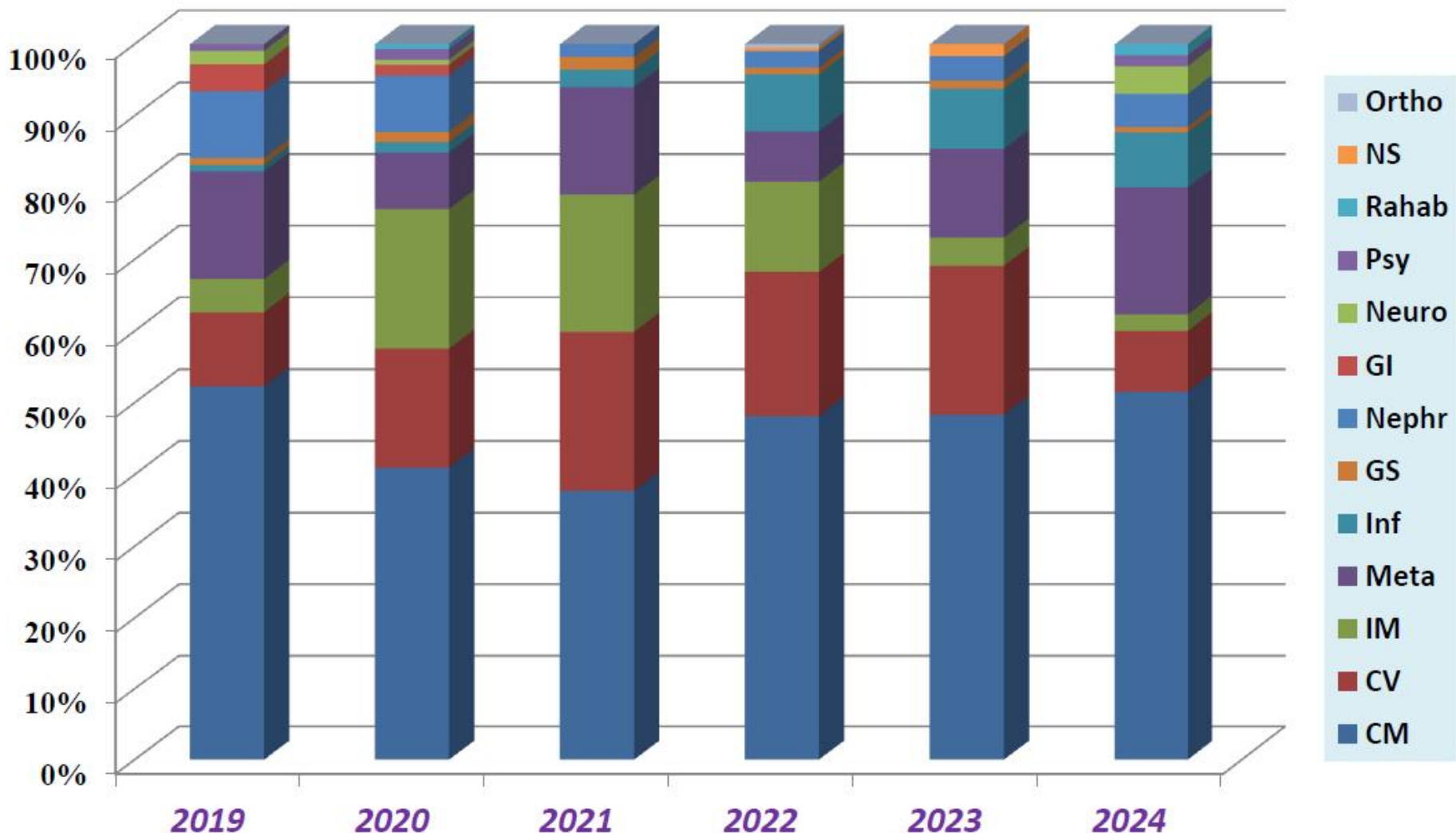
Trend of outcome



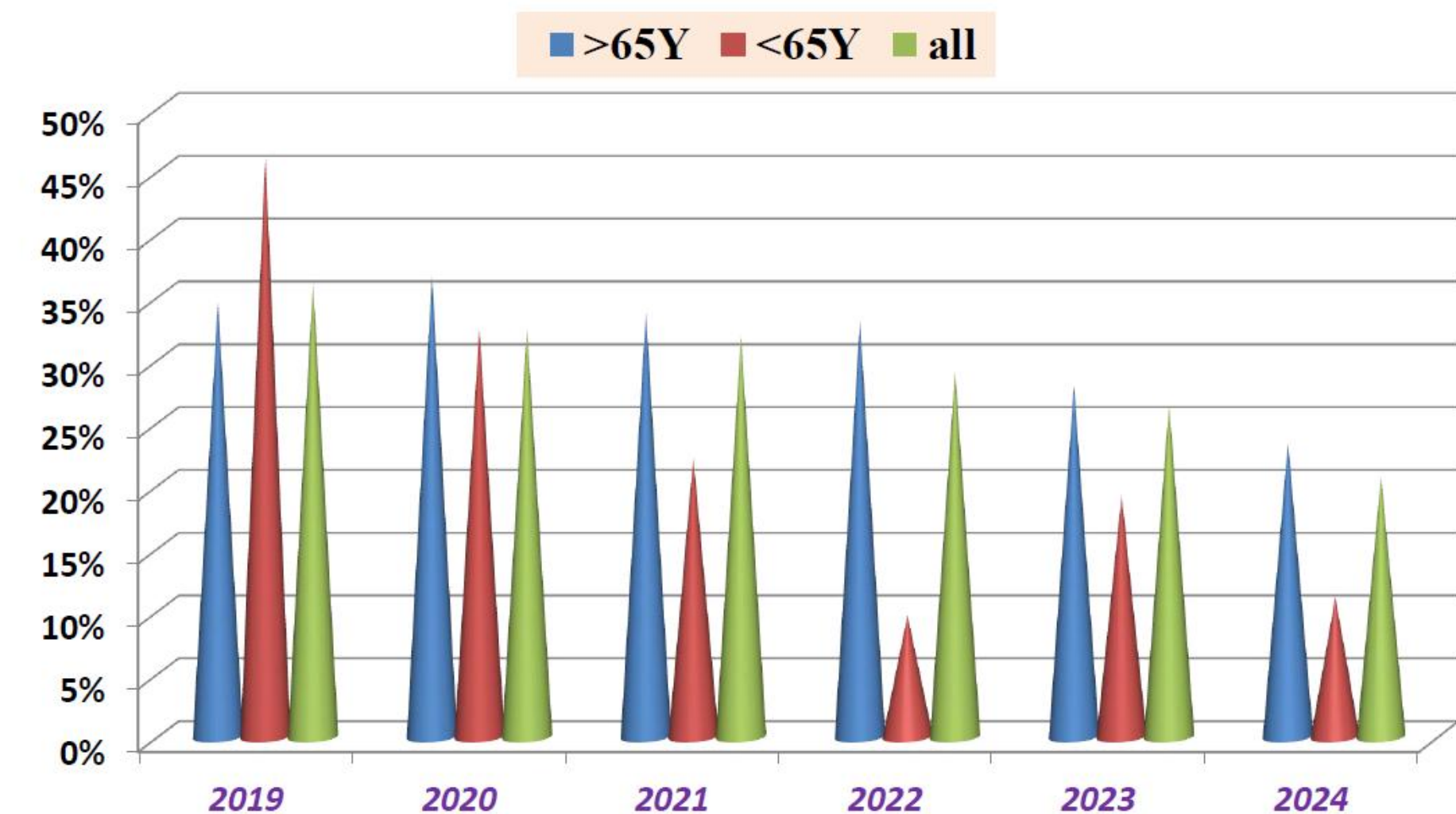
Distribution of accompanied bacteria



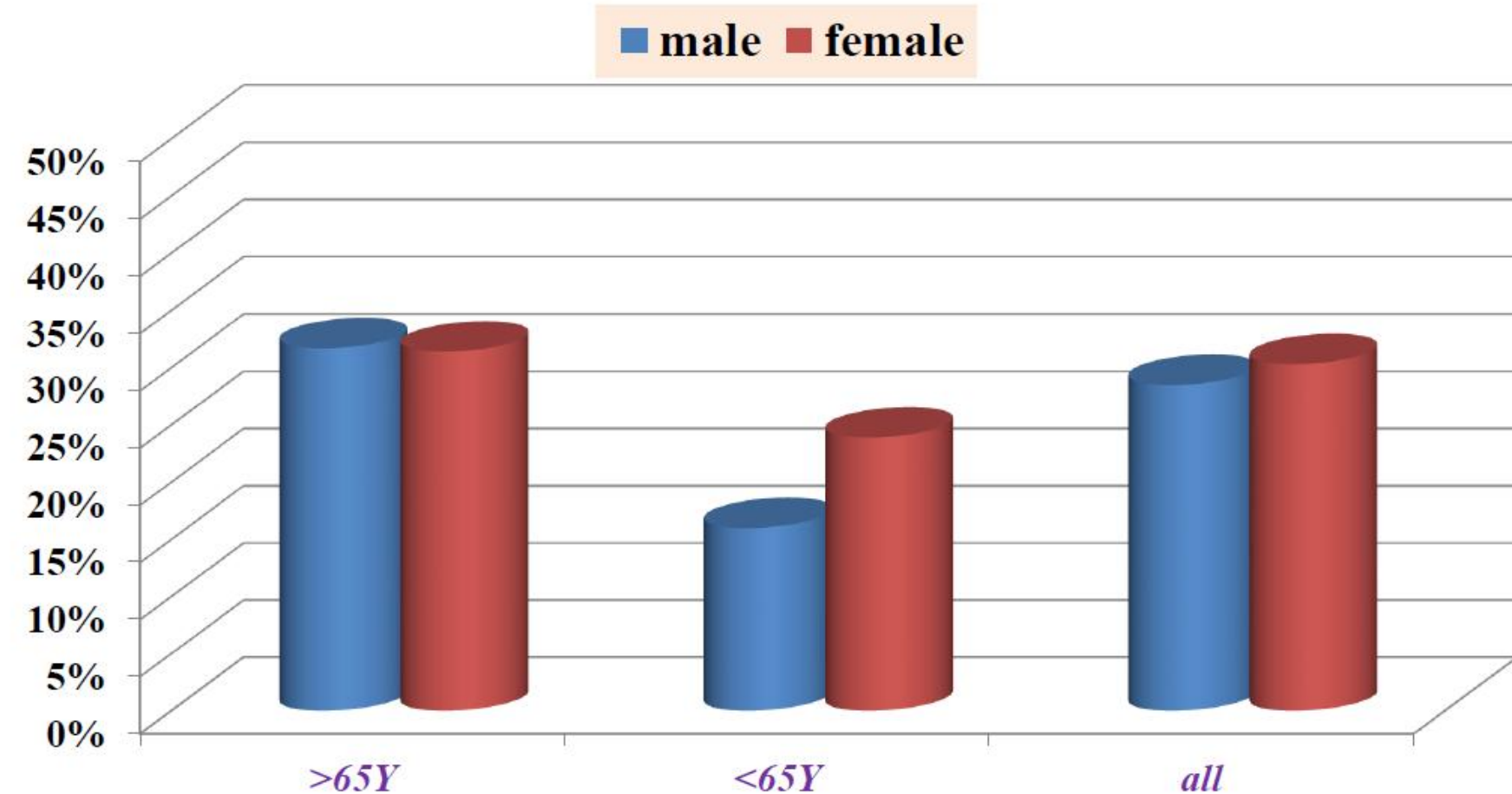
Department of care



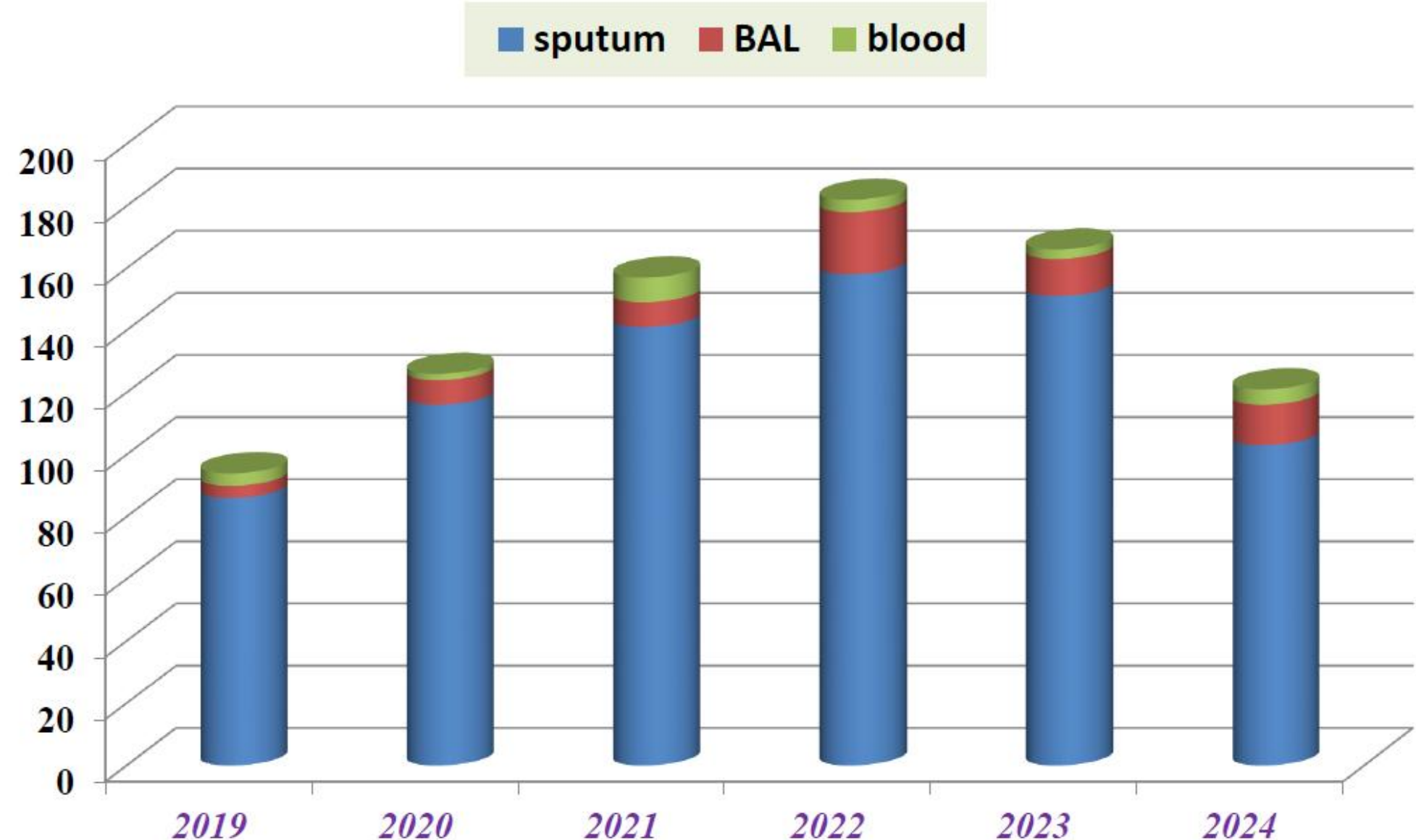
Mortality rate of elder vs non-elder -1



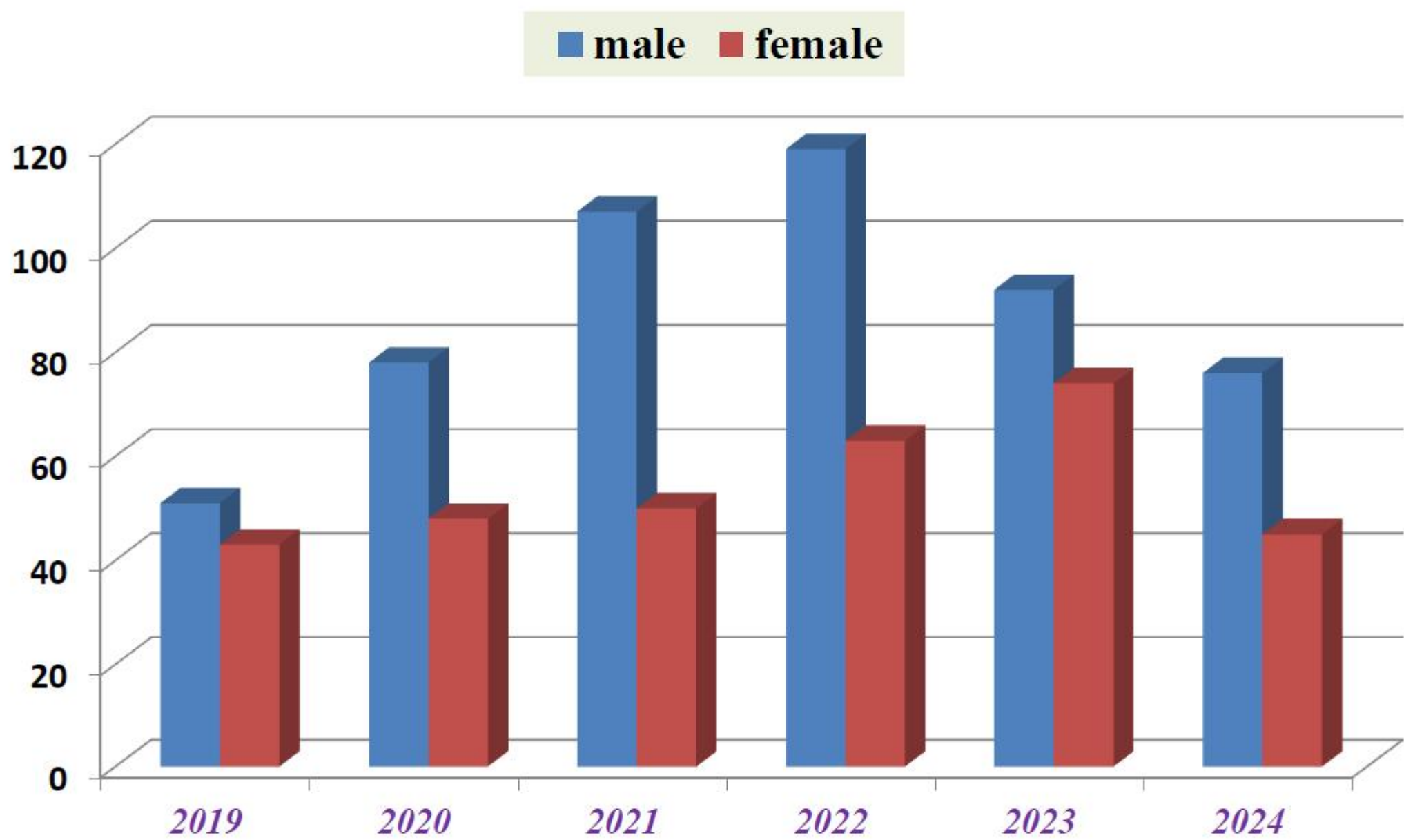
Mortality rate of elder vs non-elder -2



The cumulated cases of HI



Distribution of gender



Conclusions:

1. HI are important pathogens in the hospitalized patients. The prevalence rate of HI are higher at elderly, especial at men.

2. The crude mortality rate at our hospital are 29.2%. The mortality rate of male are higher than female on the year of 2019, 2020, 2024.

3. There are 48.6% HI patients with accompanying bacteria. It might be due to HI need factor V, X for growth.