Supplementary Table S1. Baseline clinical characteristics and mNGS-based pathogen identification of the patient.

Characteristic	Value
Age/Sex	61 years/Male
Diagnosis	Hvkp empyema
Pathogen (mNGS)	92.3% *K.pneumoniae*
Virulence genes	*iutA, rmpA*
Resistance gene	*blaSHV* (ESBL)
Co-infection	HBV
Sampling	W1-W3, pleural fluid
Outcome	Improved/discharged