

Supplemental Digital Content 1. Patient and strain characteristics

ID Patient	Age at the time of the infection (months)	Site of infection	Sample for microbiology investigation	iGAS	Emm-type	Viral co-infection	Need for surgery	ICU Admission	Clinical cure/death
1	70	Otomastoiditis complicated by thrombosis of the sigmoid sinus and sepsis	blood culture	Yes	Emm1.0	Influenza	Yes	No	Clinical cure
2	48	Otomastoiditis complicated by meningitis	CSF	Yes	Emm1.52	No	Yes	Yes	Death
3	60	Otitis	ear swab	No	Emm12.101	No	No	No	Clinical cure
4	15	Skin abscess	skin swab	No	Emm89.0	No		No	Clinical cure
5	64	Pneumonia with pleural effusion	pleural fluid	Yes	Emm1.52	Adenovirus	Yes	No	Clinical cure
6	99	Osteoarthritis complicated by sepsis	blood culture	Yes	Emm1.25	No	No	No	Clinical cure
7	14	STSS with liver failure	blood culture	Yes	Emm1.0	Parainfluenza 3 and Rhino/Enterovirus	No	Yes	Clinical cure
8	98	Septic arthritis	sinovial liquid	Yes	Emm75.0	No	No	No	Clinical cure

iGAS: invasive GAS; ICU: Intensive Care Unit