Table 2. Laboratory findings and treatment outcomes of SFTS patients

Variables	Total (n=45)	PIPA (n=9)	non-PIPA (n=36)	*P* value
Laboratory findings, median (IQR)				
WBC, cells/μL	2,100 (1,100-3,700)	1,500 (1,100-5,600)	2,150 (1,075-3,300)	0.733
Hemoglobin, g/dL	14 (13-15)	15 (14-15.5)	14 (13-15)	0.078
Platelet, × 10^3/mm^3	57 (46-79)	51 (42-68)	58 (49-81)	0.244
BUN, mg/dL	14 (9-23)	23 (12.5-32.5)	12.5 (9-20)	0.059
Creatinine, mg/dL	0.75 (0.67-1.13)	0.98 (0.70-1.62)	0.75 (0.65-1.10)	0.371
AST, U/L	258 (118.5-458.5)	329 (103-789)	203 (117-469)	0.403
ALT, U/L	111 (50-208)	105 (41-187.5)	120.5 (51.5-208.5)	0.733
ALP, U/L	76 (59-121.5)	76 (60-333)	77.5 (58-120)	0.561
Total bilirubin, mg/dL	0.4 (0.3-0.7)	0.5 (0.25-1.05)	0.4 (0.3-0.7)	0.785
CK, mg/dL	643 (341-1,759)	1,964 (615-5,477)	525 (320-1,262)	0.052
LDH, mg/dL	613 (408.5-1,450.5)	1,369 (703-4,296)	568 (403-1,276)	0.044
C-reactive protein, mg/dL	0.3 (0.1-1.0)	1.0 (0.45-1.35)	0.24 (0.10-0.90)	0.051
Procalcitonin, ng/dL	0.24 (0.10-0.715)	0.73 (0.29-14.45)	0.16 (0.10-0.39)	0.008
PT, INR	1.05 (0.99-1.14)	1.09 (1.04-1.29)	1.04 (0.98-1.14)	0.128
aPTT, sec	40 (37-52)	48 (38.7-67.5)	40 (37-50.5)	0.192
Urine WBC	7 (15.6)	3 (33.3)	4 (11.1)	0.131
Urine RBC	24 (53.3)	6 (66.7)	18 (50.0)	0.469
Leukopenia (<4000/ mm^3)	36 (80.0)	6 (66.7)	30 (83.3)	0.353
Neutropenia (<500/ mm^3)	20 (44.4)	4 (44.4)	16 (44.4)	NS
Thrombocytopenia (<150 × 10^3/mm^3)	43 (95.6)	9 (100)	34 (94.4)	NS
Renal dysfunction	13 (28.9)	4 (44.4)	9 (25.0)	0.22
Elevated cardiac marker	11/37 (29.7)	3/9 (33.3)	8/28 (28.6)	1.000
PT prolongation	12 (26.7)	3 (33.3)	9 (25.0)	0.682
aPTT prolongation	38 (84.4)	8 (88.9)	30 (83.3)	1.000
Hospital course				
Initial chest radiologic abnormality	7 (15.6)	4 (44.4)	3 (8.3)	0.022
Aggravated radiology during hospitalization	10 (22.2)	9 (100)	1 (2.8)	<0.0001
Septic shock	16 (35.6)	9 (100)	7 (19.4)	<0.0001
ICU care	16 (35.6)	9 (100)	7 (19.4)	<0.0001
Mechanical ventilation	14 (31.1)	9 (100)	5 (13.9)	<0.0001
SOFA Gr >2	42 (93.3)	9 (100)	33 (91.7)	1.000
Quick SOFA	18 (40.0)	9 (100)	9 (25.0)	<0.0001
Treatment				
Corticosteroid	11 (24.4)	6 (66.7)	5 (13.9)	0.003
Antibiotics	41 (91.1)	9 (100)	32 (88.9)	0.569
Doxycycline	38 (84.4)	8 (88.9)	30 (83.3)	1.000
Azithromycin	3 (6.7)	1 (11.1)	2 (5.6)	0.497
Ribavirin	11 (24.4)	2 (22.2)	9 (25.0)	1.000
Plasmapheresis	19 (42.2)	7 (77.8)	12 (33.3)	0.024
Plasma therapy	3 (6.7)	3 (33.3)	0 (0)	0.006
IVIG	1 (2.2)	1 (11.1)	0 (0)	0.200
Outcome				
Duration of hospitalization, days	10 (7.5-18)	43 (6-76)	9 (7-11.5)	0.060
Overall mortality	7 (15.6)	4 (44.4)	3 (8.3)	0.022
7-day mortality	4 (8.9)	2 (22.2)	2 (5.6)	0.173
14-day mortality	6 (13.3)	3 (33.3)	3 (8.3)	0.084
30-day mortality	7 (15.6)	4 (44.4)	3 (8.3)	0.022

Values are n (%) unless otherwise indicated. Abbreviations: PIPA, putative invasive pulmonary aspergillosis; IQR, interquartile range; WBC, white blood cell; BUN, blood urea nitrogen; AST, aspartate aminotransferase; ALT, alanine aminotransferase; ALP, alkaline phosphatase; CK, creatine kinase; LDH, lactate dehydrogenase; PT, prothrombin time; aPTT, activated partial thromboplastin time; RBC, red blood cell; ICU, intensive care unit; SOFA, sequential organ failure assessment; IVIG, intravenous immunoglobulin; NS, not significant.

Table 3. Clinical and mycological characteristics of SFTS patients complicated by PIPA

	Patient characteristics			PIPA risk factors and evaluation			Mycological data					
Case	Age/sex	Underlying diseases	Time from SFTS to IPA	Neutropenia	Steroid use	CT findings	Broncho-scopy	GM	Beta-D-glucan	Culture	Anti-fungal treatment	Outcome
1	54/F	None	2	–	+	Consolidation with air bronchogram, GGO	Not done	2.34	Not done	+	Not done	Died
2	61/F	None	10	+	+	Consolidation with air bronchogram, nodules	+	5.65	Not done	+	LAmB	Improved
3	66/M	None	9	+	+	Consolidation with air bronchogram, nodules, GGO	+	>10	Not done	+	VCZ	Improved
4	50/M	Lung disease	2	–	+	Consolidation, GGO	Not done	0.94	Not done	+	Not done	Died
5	60/M	DM	11	–	–	Consolidation with air bronchogram, nodules, GGO	+[*]	6.71	276.8	–	VCZ	Improved
6	73/M	DM	9	–	+	Aggravated plain x-ray	Not done	>10	539.6	+	LAmB	Died
7	66/F	None	8	+	–	Consolidation with air bronchogram, nodules, GGO	Not done	3.52	>1,000	–	VCZ	Improved
8	74/F	DM	3	–	–	Consolidation	Not done	1.38	366.4	–	Not done	Died
9	62/F	DM, Lung disease	4	+	+	GGO, nodules	Not done	>10	386.2	+	VCZ	Improved

PIPA, putative invasive pulmonary aspergillosis; DM, diabetes mellitus; GGO, ground glass opacity; GM, galactomannan; LAmB, liposomal amphotericin B; VCZ, voriconazole
*BAL-GM and BAL-β-DG were performed only in this case (BAL-BM: 1.44, BAL-β-D-glucan: >1,000).

Figure 1. Survival curves for SFTS patients complicated with and without putative invasive pulmonary aspergillosis (*P*=0.048 by log-rank test).

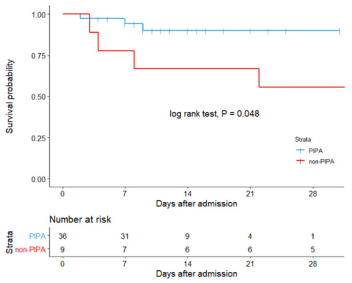
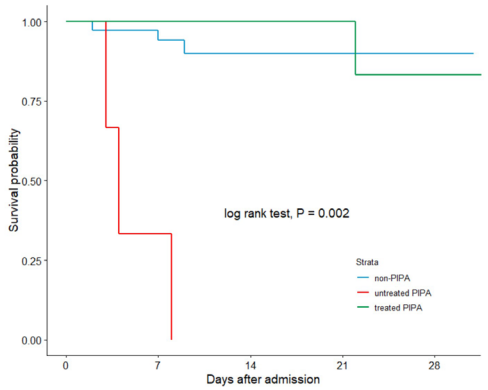


Figure 2. Survival curves for SFTS patients classified into three groups (non-PIPA, PIPA with antifungal treatment, and PIPA without antifungal treatment) in the same plot with the log-rank test.



***Disclosures.* All authors:** No reported disclosures.

1708. Epidemiology of Coccidioidomycosis-Associated Hospitalizations and In-hospital Deaths, California, 2000–2017

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***Background:* *Coccidioidomycosis (CM) is caused by inhalation of spores of the soil-dwelling Coccidioides* spp.** fungus; infection can lead to severe respiratory or disseminated disease. In California, reported cases increased 222% since 2014 (2,316 cases) peaking in 2017 with 7,466 cases (rate 18.1/100,000 population), the highest annual reported cases on record. We reviewed the California hospital CM data to describe trends, demographics, comorbidities, and risk factors for in-hospital death.

***Methods:* *Using 2000–2017 California administrative hospital discharge data, we identified hospitalizations with ≥1 CM-associated International Classification of Diseases, Ninth* or *Tenth* diagnosis code.** We calculated incidence rates per 100,000 population, assessed trends by negative binomial regression, and compared patient characteristics for potential risk factors for in-hospital death by calculating age-adjusted odds ratios (aOR) using bivariate logistic regression (significance, $P < 0.05$).

***Results:* *From 2000 to 2017, 25,372 patients were hospitalized with a CM discharge code in California, and hospitalization rates increased significantly from 2.*3 to 5.8/100,000 population ($P < 0.01$) (Figure 1). Most patients were male (69%), >40 years old (69%), white (40%) or Hispanic (38%), and residents of the higher incidence CM regions in California (52%). Most (83%) were not immunocompromised; only 3% had a human immunodeficiency virus (HIV) diagnosis. A total of 1,951 (8%) patients died in-hospital with more deaths among those with disseminated CM (15%), particularly meningitis (17%), than with pulmonary disease (7%). Frequency of death increased with increasing age (0–19 years [2%], 20–39 years [5%], 40–59 years [7%], 60+ years [13%]). Odds of in-hospital death was highest among patients with HIV (aOR 6.4, 95% CI 5.3–7.7) or chronic kidney disease (aOR 2.6, 95% CI 2.3–2.8) (Figure 2).

Conclusion:* *CM-associated hospitalization rates have increased in California in the last 18 years, peaking in 2017, with 1 in 12 patients dying in-hospital. Risk factors for death include disseminated CM, older age, HIV infection, and chronic kidney disease. Clinicians should be aware of these risks in caring for patients hospitalized with CM.

Figure 1: Number of patients hospitalized with coccidioidomycosis and rate per 100,000 population, California, 2000-2017.

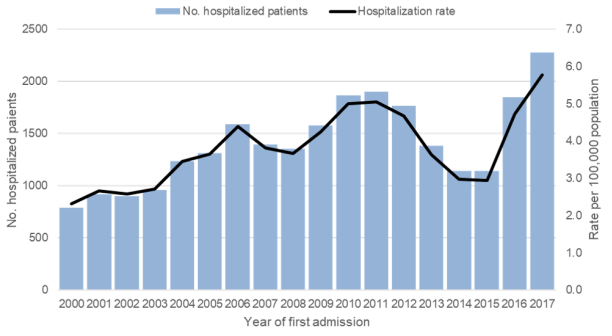
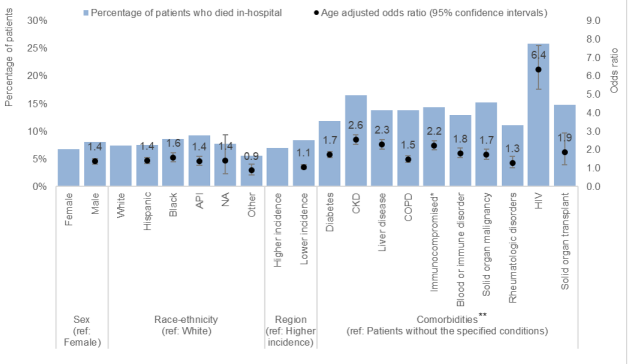


Figure 2: Percentage of patients hospitalized with coccidioidomycosis who died in-hospital, and the age adjusted odds of in-hospital death calculated using bivariate logistic regression, California, 2000-2017.



API (Asian/Pacific Islander); NA (Native American/Eskimo/Aleut); CKD (Chronic kidney disease); COPD (Chronic obstructive pulmonary disease); ref (odds ratio reference group)
*Immunocompromised condition defined as having at least one diagnosis code for a blood or immune disorders, solid organ malignancy, rheumatologic disorder, HIV, or solid organ transplant.
**Comorbidities are not mutually exclusive.

***Disclosures.* All Authors:** No reported disclosures.