Table 1. Demographic and Characteristics of Mothers

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	Total Population† (N = 236)	Flu vaccine only (n=66)	Tdap vaccine only (n=32)	Both Flu and Tdap (n=64)	No vaccine (n = 74)	P-value
Age at delivery, years						
Median (IQR)	28.5 (25.3-33.2)	30.5 (25.6-33.5)	30.2 (25.3-34.2)	28.2 (24.3-34.5)	28.4 (25.4-31.2)	0.17
Race, n (%)						
Black	201 (85.17)	58 (87.88)	25 (78.12)	52 (81.25)	66 (89.19)	0.80
White	12 (5.08)	4 (6.06)	3 (9.37)	2 (3.12)	3 (4.05)	
Hispanic	14 (5.93)	2 (3.03)	2 (6.25)	6 (9.37)	4 (5.40)	
Asian	5 (2.12)	2 (3.03)	1 (3.12)	1 (15.6)	1 (1.35)	
Not specified	4 (1.69)	0 (0.0)	1 (3.12)	3 (4.69)	0 (0.0)	
Parity						
Median (IQR)	1 (1-3)	1 (0-2)	1 (0.5-3)	1 (1-2.5)	2 (1-3)	*0.0014*
Chronic medical conditions, n (%)						
Yes						
HTN	33 (13.98)	12 (18.18)	4 (12.5)	8 (12.5)	9 (12.16)	0.59
DM	2 (0.85)	0 (0.0)	0 (0.0)	1 (1.56)	1 (1.35)	0.53*
Tobacco use in pregnancy, n (%)						
Yes	48 (20.34)	15 (22.73)	8 (25.0)	9 (14.06)	16 (21.62)	0.74
Prenatal care						
On ART during pregnancy, n (%)	134 (56.78)	37 (56.06)	17 (53.13)	34 (53.13)	46 (62.16)	0.26
CD4, cells/mm³ (IQR)						
At presenting appt	421 (247-620)	449.5 (189-621)	338.5 (257-541.5)	435 (276-636)	416.5 (251-648)	0.85
At delivery	464.5 (282-616)	434 (229-592)	464.5 (337.5-623)	469.5 (331-637)	455 (266-607)	0.75
Viral Load, copies/mL						
During pregnancy‡, n (%)						
>200	138 (59.48)	32 (48.48)	16 (50.0)	40 (62.50)	50 (67.57)	*0.024*
>1000	120 (51.72)	31 (46.97)	14 (43.75)	33 (51.56)	42 (56.76)	0.13
Trimester 3§, n (%)						
>200	80 (34.33)	18 (27.27)	10 (31.25)	21 (32.81)	31 (41.89)	0.061
>1000	59 (25.32)	14 (21.21)	10 (31.25)	13 (20.31)	22 (29.73)	0.22

Percentages (%) are by column unless otherwise specified. Medians presented with corresponding IQR, means with standard deviation.
†Percentages derived from the column total
‡n = 232
§n = 233

Table 2. Relative Risk of a Healthcare Visit in the first 6 months of life for URI in Vaccinated vs Unvaccinated Mothers

Table 2. Relative Risk of a Healthcare Visit in the first 6 months of life for URI in Vaccinated vs Unvaccinated Mothers

	RR (95% CI)	P-value	aRR (95% CI)	P-value
Clinic visit (n = 221)	0.75 (0.27, 2.20)	0.62	--	--
ED/urgent care visit (n = 222)	0.79 (0.53, 1.19)	0.26	0.81† (0.53, 1.26)	0.35
Hospitalization (n = 221)	1.56 (0.45, 5.41)	0.48	--	--
ANY Visit (n = 301)	0.86 (0.59, 1.26)	0.44	0.81† (0.54, 1.20)	0.29

†Adjusted for year of delivery, mother's delivery age, race, new diagnosis of HIV during pregnancy, parity, ART pre-pregnancy, CD4 count at presentation and VL >200 copies/mL in the third trimester; n = 214

Table 3. Birth outcomes in HEU infants of Vaccinated vs Unvaccinated Mothers

Table 3. Birth outcomes in HEU infants of Vaccinated vs Unvaccinated Mothers

	Total Population† (N = 236)	Flu vaccine only (n = 66)	Tdap vaccine only (n = 32)	Both Flu and Tdap (n = 64)	P-value‡	No vaccine (n =74)	P-value
Gestational Age, wks Median (IQR)	38.6 (37.6-39.4)	38.5 (38.0-39.1)	38.5 (38.0-40.0)	39.0 (37.5-40.0)	0.46	38.1 (37.1-39.1)	0.06
Birth weight, g Median (IQR)	3012 (2708-3360)	2975 (2710-3290)	3020 (2860-3230)	3122.5 (2738-3458)	0.47	2970 (2550-3320)	0.19
SGA, n (%)§	14 (6.01)	5 (35.7)	0 (0.0)	4 (28.6)¶	0.3277	5 (35.7) ‖	
IUGR, n (%)§	8 (3.43)	4 (50.0)	0 (0.0)	4 (50.0)¶	0.4133	0 (0.0) ‖	

Percentages (%) are by row unless otherwise specified.
*Statistical significance at alpha level 0.05.
†Percentages derived from the overall column total, N = 236
‡P-value is excluding those designated as 'no vaccine' and across all three remaining groups for continuous/categorical, N = 162; chi-squared or Fisher's exact test used when data is skewed
§Three missing observations, n = 233
¶One missing observation, n = 63
‖Two missing observations, n = 72

Conclusion. There was a lower risk of healthcare visits for ARI in the first 6-months of life in HEU infants born to mothers who received antepartum vaccinations. Although not statistically significant, larger studies are needed to fully characterize the immune responses in this unique population.

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1146. Thrombocytosis in Infants with Congenital Cytomegalovirus Infection Being Treated with Valganciclovir

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Background. Congenital CMV (cCMV) is associated with sensorineural hearing loss and neurodevelopmental disabilities. Infants with symptomatic cCMV infection benefit from 6 months of oral valganciclovir (vGCV) therapy. Neutropenia, thrombocytopenia, and hepatotoxicity are adverse effects vGCV, for which we monitor. We observed a pattern that cCMV infants treated with vGCV developed an uptrend in platelets and/or thrombocytosis (platelet count >450,000/uL) while on therapy. This observation has not previously been reported.

Methods. Medical records and laboratory results from our multi-disciplinary cCMV clinic led by Infectious Diseases at Lurie Children's Hospital were reviewed (2017-2020). Data included cCMV signs/symptoms, cCMV treatment prescribed, indication for ganciclovir/vGCV treatment, and complete blood count prior to, during, and post- vGCV therapy.

Results. Of 21 cCMV infants referred to clinic, 14 received >1 month of vGCV for symptomatic disease, 1 discontinued vGCV < 1 month due to perceived fussiness, and 1 was part of a clinical trial. Four infants were initially treated with ganciclovir for ≤1 month and transitioned to vGCV. Of the 14 patients treated with vGCV, 10 (71%) had sensorineural hearing loss (50% unilateral), 12 (86%) had central nervous system abnormalities (including cystic lesions on head ultrasound), 5 (36%) had thrombocytopenia, and 7 (50%) were intrauterine growth restricted [Table 1]. Eleven infants (79%) developed thrombocytosis. Thirteen infants (93%) had an uptrend in platelet count [not including normalization of initial thrombocytopenia (platelets < 150,000/uL)]. Figure 1 shows platelet counts by time with respect to vGCV treatment. Neutropenia (absolute neutrophil count < 500/uL) occurred in 1 patient that required temporary discontinuation of vGCV.

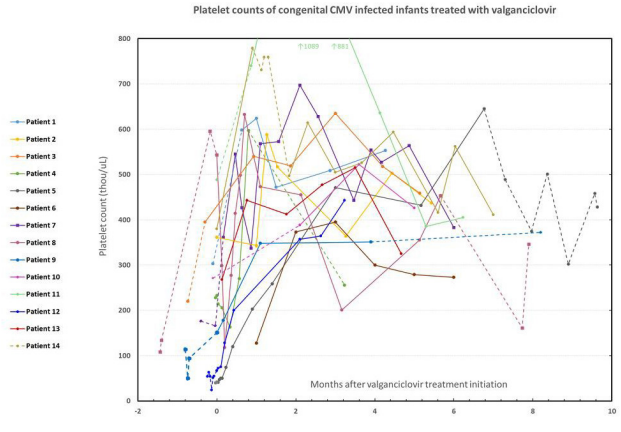
Table 1

Congenital CMV patients receiving valganciclovir (vGCV)

Patient	Congenital CMV features	Age of CMV testing (day of life)	Age at start of treatment (day of life)	Duration of vGCV treatment (months)	Platelet uptrend while on vGCV	Thrombocytosis >450,000 while on vGCV	Platelets oscillated* while on vGCV	Sensorineural hearing loss (SNHL)
1	SNHL, CNS subependymal cystic lesions	2	19	6	Y	Y	N	unilateral
2	SNHL, CNS subependymal cystic lesions	2	12	6	Y	Y	Y	unilateral
3	SNHL	3	22	6	Y	Y	N	unilateral
4	thrombocytopenia, rash, ventriculomegaly, pneumonitis	2	2	6†	Y	Y	N	
5	IUGR, petechiae, CNS periventricular calcification, ventriculomegaly	1	1	7†	Y	Y	N	
6	SNHL, thrombocytopenia, CNS complex cystic lesions in germinal matrix regions	3	9	6	N	N	Y	bilateral
7	SNHL, CNS periventricular white matter changes	10	12	6	Y	Y	Y‡	bilateral
8	IUGR, thrombocytopenia, petechial rash, microcephaly, SNHL, CNS cortical malformation, ventriculomegaly	45	45	7†	Y	Y	Y	bilateral
9	thrombocytopenia, ventriculomegaly	2	24	5	Y	N	N	
10	IUGR, CNS intracranial calcifications, hyperbilirubinemia	9	14	6	Y	Y	Y	
11	IUGR, SNHL	3	31	6	Y	Y	Y	bilateral
12	IUGR, thrombocytopenia, CNS cerebral calcifications and cortical malformation, SNHL	2	7	6†	Y	N	N	unilateral
13	IUGR, SNHL, CNS periventricular cysts	4	12	6	Y	Y	N	bilateral
14	IUGR, SNHL, microcephaly, ventriculomegaly	1	35	6	Y	Y	N	bilateral

sensorineural hearing loss (SNHL); intrauterine growth restriction (IUGR); yes (Y); no (N)
*oscillated = both increased and decreased over time (as opposed to only trending upward)
†received IV ganciclovir initially and transitioned to vGCV
‡on numerous other medications, including antiepileptics

Figure 1



Conclusion. We observed an interesting trend of rising platelet count and the development of thrombocytosis in the majority of our cCMV patients on vGCV. Platelet elevation associated with vGCV has not previously been described. This observation is limited by small number of patients and thrombocytosis is not a definitive association/adverse effect. With increasing use of vGCV and interest in its effect on bone marrow function, this observation is notable and warrants further study.

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1147. Short Course of Voriconazole Therapy as a Risk Factor for Relapse of Invasive Pulmonary Aspergillosis

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Session: P-52. Medical Mycology

Background. Invasive pulmonary aspergillosis (IPA) is a life-threatening opportunistic infection which usually occurs in immunocompromised patients. Recommended duration of voriconazole therapy is a minimum of 6-12 weeks for IPA, despite the lack of any firm evidence. In addition, risk factors for relapse of IPA are still unclear. Here, we explored risk factors for IPA relapse after initial treatment.

Methods. All patients with proven or probable IPA who had finished voriconazole treatment between 2005 and 2019 in a tertiary-care hospital were reviewed. IPA relapse was defined as re-diagnosis of proven or probable IPA at the same site within 1 year after treatment termination. Short course of voriconazole treatment was defined as a treatment less than 9 weeks, which is a median of the recommended minimum duration of therapy from the Infectious Disease Society of America. The radiological response was defined as a reduction in IPA burden by more than 50% on chest computed tomography (CT).

Results. Of 87 patients who had completed voriconazole treatment, 14 (16.1%) experienced IPA relapse. Multivariable Cox regression identified that short voriconazole treatment duration (adjusted hazard ratio [aHR], 3.7; 95% confidence interval [CI], 1.1–12.3; P=0.033) and radiological non-response (aHR, 4.6; 95% CI, 1.2–17.5; P=0.026) were independently associated with relapse of IPA after adjusting for several clinical risk factors.

Conclusion. Less improvement in CT, and short duration of voriconazole therapy were the independent risk factors for relapse after treatment of IPA. Longer duration of therapy should be considered for those at higher risk of relapse.

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1148. Activity of Posaconazole and Comparator Antifungal agents Tested Against Filamentous Fungi

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Session: P-52. Medical Mycology

Background. Posaconazole (POS) is a broad-spectrum triazole antifungal that exhibits potent antifungal activity against a variety of yeasts and molds. We evaluated the in vitro activities of posaconazole and comparator antifungal agents against 2,554 isolates of filamentous fungi including 2,100 *Aspergillus* species and 454 non-*Aspergillus* moulds (98 *Fusarium*, 81 *Mucorales* and 76 *Scedosporium* species isolates) collected worldwide in 2010-2018 from clinically significant infections.

Methods. Isolates were identified using sequencing and/or MALDI-TOF MS methods. Posaconazole, itraconazole, voriconazole, caspofungin, anidulafungin, micafungin, and amphotericin B were tested using the reference broth microdilution method according to CLSI guidelines.

Results. Posaconazole showed comparable activity to itraconazole and voriconazole against *A. fumigatus*. Categorical agreement between posaconazole and the other azoles tested against *A. fumigatus* ranged from 98.2-98.7%. Most of the *Aspergillus* species isolates tested (>90%) were WT to all azoles and echinocandins. Among the isolates of *A. fumigatus*, the rate of NWT strains varied across the different geographic regions. The frequency of azole NWT strains of *A. fumigatus* from Europe increased steadily from 2010 to 2018. There was no consistent trend for an increased frequency of NWT strains from other geographic areas. The azoles and echinocandins showed poor activity against *Fusarium* and *Scedosporium* species. Posaconazole ($MIC_{50/90}$, 1/2 mg/L) and amphotericin B ($MIC_{50/90}$, 1/2 mg/L) were the most active agents against the Mucorales isolates.

Conclusion. Posaconazole exhibited excellent activity against most species of *Aspergillus* and was comparable to itraconazole and voriconazole. Most *Aspergillus* species remain susceptible to triazoles. Although there was no evidence for an increasing frequency of NWT strains among *A. fumigatus* isolates from North America, Latin America or the Asia-Pacific region, we confirm an increase in the rate of NWT strains to all three triazoles among isolates from Europe.

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1149. Baseline Chest CT Findings in Patients with Pulmonary Mold Infections: A Post-Hoc Analysis from the Phase 3 SECURE Study that Compared Isavuconazole to Voriconazole for the Primary Treatment of Invasive Mold Disease

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Session: P-52. Medical Mycology

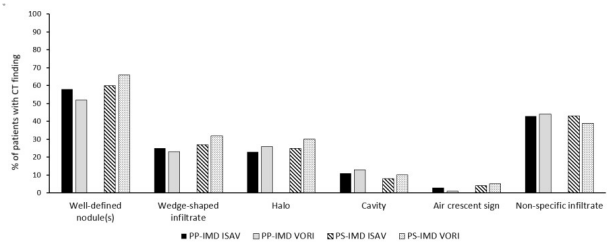
Background. SECURE was a global, double-blind, Phase 3 study that randomized 527 patients 1:1 to isavuconazole (ISAV) or voriconazole (VORI) for the primary treatment of invasive mold disease (IMD) caused by *Aspergillus* or other filamentous fungi. Patients were classified as having proven/probable IMD (PP-IMD) or possible IMD (PS-IMD) according to EORTC/MSG 2008 criteria, and the majority (n=412) had pulmonary disease only. This post-hoc analysis describes baseline CT findings in these patients and explores the association between these findings and treatment outcomes.

Methods. A blinded, independent review committee assessed the certainty of diagnosis (PP-IMD vs PS-IMD), location of disease (pulmonary only, pulmonary plus other organ, non-pulmonary only), and both overall and clinical responses at end-of-treatment. Radiology assessments were done by central blinded radiologists who characterized pulmonary lesions as follows: well-defined nodule(s) with or without halo sign, wedge-shaped infiltrate, cavity, air crescent sign, or non-specific focal infiltrate.

Results. Of the 412 patients with pulmonary disease only, 223 (54%) had PP-IMD and 189 (46%) had PS-IMD. Well-defined nodule(s) was the predominant radiological finding at baseline in patients with PP-IMD or PS-IMD (PP-IMD 55%, PS-IMD 63%), followed by non-specific focal infiltrate (PP-IMD 43%, PS-IMD 41%), wedge-shaped infiltrate (PP-IMD 24%, PS-IMD 30%), and halo (PP-IMD 25%, PS-IMD 28%). A small proportion of patients had a cavity (PP-IMD 12%, PS-IMD 9%) or air crescent sign (PP-IMD 2%, PS-IMD 4%).

Patients with air crescent sign had low all-cause mortality through Days 42 and 84, and high overall and clinical response rates at end-of treatment (PP-IMD: 0, 0, 75%, 100% and PS-IMD: 0, 13%, 75%, 88%, respectively). There was no other clear association between baseline CT findings and either outcomes of all-cause mortality or overall and clinical responses.

Figure. Chest CT findings at baseline in patients with PP-IMD or PS-IMD (pulmonary only)



Conclusion. In patients with pulmonary IMD, the predominant radiological finding at baseline was well-defined nodule(s) in both PP-IMD and PS-IMD. Air crescent sign was infrequent, but was associated with lower all-cause mortality and higher overall and clinical responses. Otherwise, baseline CT findings did not appear to predict treatment outcomes in this Phase 3 study.

Disclosures. **Kamal Hamed, n/a**, **Basilea Pharmaceutica International Ltd.** (Employee) **Marc Engelhardt, n/a**, **Basilea Pharmaceutica International Ltd.** (Board Member, Consultant, Employee, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Shareholder, Speaker's Bureau, Independent Contractor, Other Financial or Material Support)**Basilea Pharmaceutica International Ltd.** (Employee) **Mikael Saulay, n/a**, **Basilea Pharmaceutica International Ltd.** (Employee) **Laura Kovanda, n/a**, **Astellas Pharma Inc** (Employee)