Table II: Recommended prophylaxis regimens according to patient population. See Table III for dose and monitoring recommendations.
Patient subgroups shaded blue are at higher risk of mould infections and yellow are at higher risk of yeast infections

Disease	Specific subgroup		Timing and duration of prophylaxis	Recommended prophylaxis	Alternative if recommended prophylaxis contraindicated
(1) ALL	**NON RELAPSED ALL**				
	High Risk (HR) B-cell ALL (including Ph+/like subtypes), or **T-cell ALL,** or **Infantile ALL**		**Induction** **Start**: at diagnosis, irrespective of ANC **Stop**: when ANC expected to remain ≥0.5x10^9/L for at least 7 days AND when high-dose steroids completed **Consolidation & DI** **Start**: when ANC <0.5x10^9/L **Stop**: when ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Liposomal amphotericin B** three times a week (when on *weekly* vincristine* or TKI) OR **Voriconazole** tablets (preferred) or liquid (when not on *weekly* vincristine or TKI) (*withhold voriconazole the day before, day of, and day after vincristine).	**Echinocandin (micafungin or caspofungin)**
	Burkitt Leukaemia		**All cycles with expected prolonged (>7d) neutropenia.** **Start**: when ANC <0.5x10^9/L **Stop**: when ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Echinocandin (micafungin or caspofungin)**	**Fluconazole**
	Standard Risk B-cell ALL	All subtypes	**Induction** Routine prophylaxis is not required		
		High Risk subtype	**Consolidation & Delayed Intensification** Manage as per **HR B-cell ALL (Consolidation and DI phases)**		
		Favourable or Average subtype	**Consolidation & Delayed Intensification** Routine prophylaxis is not required		

TKIs may include (but not limited to): carfilzomib, dasatinib, sorafenib, imatinib. Refer to protocol and oncology pharmacy for management of azoles and TKIs; Therapeutic 1 Drug Monitoring required for voriconazole and posaconazole.
ANC, absolute neutrophil count; TKI, Tyrosine Kinase Inhibitors; HSCT, Haemopoetic stem cell transplantation; IFI, Invasive fungal infection; GvHD, Graft versus host disease; CAR-T, Chimeric antigen receptor T cell therapy; CRS, Cytokine release syndrome; ICANS, Immune effector cell-associated neurotoxicity syndrome

Disease	Specific subgroup	Timing and duration of prophylaxis	Recommended prophylaxis	Alternative if recommended prophylaxis contraindicated
(1) ALL	**RELAPSED ALL**			
	Relapsed ALL	**Start:** at relapse diagnosis with **<u>Induction</u>** chemotherapy **Stop:** ANC expected to remain ≥0.5x10^9/L for at least 7 days and not on high-dose steroids	**Liposomal amphotericin B** three times a week (when on *weekly* vincristine* or TKI) OR **Voriconazole** tablets (preferred) or liquid (when not on *weekly* vincristine* or TKI) (*withhold voriconazole the day before, day of, and day after vincristine).	**Echinocandin (micafungin or caspofungin)**
(2) AML	**Non relapsed** or **Infantile AML**	**Start:** at diagnosis (cycle 1/induction) or ANC<0.5x10^9/L (subsequent cycles) **Stop:** when ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Posaconazole** tablets (including crushed): if ≥13yrs OR ≥10yrs and ≥30kg Alternative: **Voriconazole** tablets (preferred) or liquid.	**Echinocandin (micafungin or caspofungin)** (if on TKI OR gemtuzumab) Alternative: **Liposomal amphotericin B** three times a week
	Relapsed	**Start:** at relapse diagnosis **Stop:** continue until HSCT then manage as per **(7) Allogenic HSCT**		
(3) Other leukaemia	**Mixed phenotype acute leukaemia**	Manage as per **HR B-cell ALL**		
	Myelodysplastic syndrome	If prolonged (>7 days) neutropenia during *induction*, consider managing as per **High Risk B-Cell ALL**		
	Juvenile myelomonocytic (JMML)			
	Chronic myeloid leukaemia	Routine prophylaxis not required		

TKIs may include (but not limited to): carfilzomib, dasatinib, sorafenib, imatinib. Refer to protocol and oncology pharmacy for management of azoles and TKIs; Therapeutic 2 Drug Monitoring required for voriconazole and posaconazole.

ANC, absolute neutrophil count; TKI, Tyrosine Kinase Inhibitors; HSCT, Haemopoetic stem cell transplantation; IFI, Invasive fungal infection; GvHD, Graft versus host disease; CAR-T, Chimeric antigen receptor T cell therapy; CRS, Cytokine release syndrome; ICANS, Immune effector cell-associated neurotoxicity syndrome

Disease	Specific subgroup	Timing and duration of prophylaxis	Recommended prophylaxis	Alternative if recommended prophylaxis contraindicated
(4) Lymphoma	**HR B-cell lymphoblastic lymphoma** or **T-cell lymphoblastic lymphoma**	Manage as per **High Risk B-cell ALL**		
	SR B-cell lymphoblastic lymphoma	Routine prophylaxis not required.		
	Burkitt leukaemia	**Refer to (1) ALL, Burkit leukaemia**		
	Burkitt lymphoma	**Start:** when ANC <0.5x10^9/L and during intensive phases only **Stop**: when ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Fluconazole**	**Liposomal amphotericin B** three times a week if at home or **Echinocandin (micafungin or caspofungin)**if in hospital
	Lymphoma other	Routine prophylaxis not required. Consider fluconazole if prolonged (>10 days) neutropenia (ANC <0.5x10^9/L)		
(5) Solid tumours	Medulloblastoma	**Start**: when ANC <0.5x10^9/L or mucositis (Grade 2 or above) **Stop**: when ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Fluconazole**	**Echinocandin (micafungin or caspofungin)**
	All other solid tumours	Routine prophylaxis not required		
(6) Aplastic anaemia	**Severe aplastic anaemia**	**Start**: At diagnosis **Stop**: when ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Posaconazole** tablets (including crushed): if ≥13yrs OR ≥10yrs and ≥30kg Alternative: **Voriconazole** tablets (preferred) or liquid	**Liposomal amphotericin B** three times a week

TKIs may include (but not limited to): carfilzomib, dasatinib, sorafenib, imatinib. Refer to protocol and oncology pharmacy for management of azoles and TKIs; Therapeutic 3 Drug Monitoring required for voriconazole and posaconazole.

ANC, absolute neutrophil count; TKI, Tyrosine Kinase Inhibitors; HSCT, Haemopoetic stem cell transplantation; IFI, Invasive fungal infection; GvHD, Graft versus host disease; CAR-T, Chimeric antigen receptor T cell therapy; CRS, Cytokine release syndrome; ICANS, Immune effector cell-associated neurotoxicity syndrome

Disease	**Specific subgroup**		**Timing and duration of prophylaxis**	**Recommended prophylaxis**	**Alternative if recommended prophylaxis contraindicated**
(7) Allogeneic HSCT	**Conditioning and PRE engraftment**	No prior IFI	**Start**: during conditioning phase	**Fluconazole** (Consider mould-active prophylaxis if heavily pre-treated or cord-HSCT. Discuss with ID)	**Echinocandin (micafungin or caspofungin)**
		Prior IFI	Mould-active secondary prophylaxis may be required. Discuss with ID. **Note:** voriconazole and posaconazole interact with many chemotherapy conditioning agents, liaise with ID and CCC pharmacy for an appropriate alternative through conditioning.		
	POST engraftment	No GVHD	**Continue prophylaxis as per pre-engraftment above** **STOP:** from day +75 onwards and CD4 >0.2		
		Severe acute GvHD (steroid dependent or grade II-IV) Extensive chronic GVHD	**Start**: at diagnosis of severe or extensive GvHD **Stop**: individualised (when immunosuppression sufficiently weaned). Discuss ongoing need for prophylaxis when steroids are ≤0.5mg/kg/day prednisolone equivalent.	**Posaconazole** tablets (including crushed): if ≥13yrs OR ≥10yrs and ≥30kg Alternative: **Voriconazole** tablets (preferred) or liquid	**Liposomal amphotericin B** three times a week if at home or **Echinocandin (micafungin or caspofungin)**if in hospital

TKIs may include (but not limited to): carfilzomib, dasatinib, sorafenib, imatinib. Refer to protocol and oncology pharmacy for management of azoles and TKIs; Therapeutic 4 Drug Monitoring required for voriconazole and posaconazole.

ANC, absolute neutrophil count; TKI, Tyrosine Kinase Inhibitors; HSCT, Haemopoetic stem cell transplantation; IFI, Invasive fungal infection; GvHD, Graft versus host disease; CAR-T, Chimeric antigen receptor T cell therapy; CRS, Cytokine release syndrome; ICANS, Immune effector cell-associated neurotoxicity syndrome

Disease	Specific subgroup	Timing and duration of prophylaxis	Recommended prophylaxis	Alternative if recommended prophylaxis contraindicated
(8) Autologous HSCT	**All patients**	**Start**: during conditioning phase **Stop**: Day +30 and ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Fluconazole**	**Echinocandin (micafungin or caspofungin)**
(9a) CAR-T (B-cell directed)	No prior IFI and not relapsed within 12 months of HSCT	**Start**: during lymphodepletion **Stop**: day +30 and ANC expected to remain ≥0.5x10^9/L for at least 7 days	**Fluconazole**	**Echinocandin (micafungin or caspofungin)**
	Any of: Relapsed within 12 months of HSCT, CRS requiring tocilizumab, ICANS requiring high dose steroids.	**Start**: during lymphodepletion **Stop**: day +30 and ANC expected to remain ≥0.5x10^9/L for at least 7 days **If prior IFI:** discuss duration with ID	**Posaconazole** tablets (including crushed): if ≥13yrs OR ≥10yrs and ≥30kg Alternative: **Voriconazole** tablets (preferred) or liquid	**Echinocandin (micafungin or caspofungin)**
(9a) CAR-T (T-cell directed)	All patients undergoing **T-cell directed** CAR-T	**Start**: during lymphodepletion **Stop**: 6 months and ANC expected to remain ≥0.5x10^9/L for at least 7 days **If prior IFI:** discuss duration with ID	**Posaconazole** tablets (including crushed): if ≥13yrs OR ≥10yrs and ≥30kg Alternative: **Voriconazole** tablets (preferred) or liquid	**Discuss with ID**
(10) Hemophagocytic lymphohistiocytosis	Children receiving corticosteroid and either chemotherapy and/or	**Start:** On commencement of treatment	**Voriconazole**	**Echinocandin (micafungin or caspofungin)** (if receiving

TKIs may include (but not limited to): carfilzomib, dasatinib, sorafenib, imatinib. Refer to protocol and oncology pharmacy for management of azoles and TKIs; Therapeutic 5 Drug Monitoring required for voriconazole and posaconazole.

ANC, absolute neutrophil count; TKI, Tyrosine Kinase Inhibitors; HSCT, Haemopoetic stem cell transplantation; IFI, Invasive fungal infection; GvHD, Graft versus host disease; CAR-T, Chimeric antigen receptor T cell therapy; CRS, Cytokine release syndrome; ICANS, Immune effector cell-associated neurotoxicity syndrome

	ruxolitinib and or/emapalumab	**Stop:** individualised (when immunosuppression sufficiently weaned).		etoposide chemotherapy or ruxolitinib)

TKIs may include (but not limited to): carfilzomib, dasatinib, sorafenib, imatinib. Refer to protocol and oncology pharmacy for management of azoles and TKIs; Therapeutic Drug Monitoring required for voriconazole and posaconazole.

ANC, absolute neutrophil count; TKI, Tyrosine Kinase Inhibitors; HSCT, Haemopoetic stem cell transplantation; IFI, Invasive fungal infection; GvHD, Graft versus host disease; CAR-T, Chimeric antigen receptor T cell therapy; CRS, Cytokine release syndrome; ICANS, Immune effector cell-associated neurotoxicity syndrome