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

Disease	Specific subgroup		Recommended prophylaxis	If recommended agent contraindicated*	Duration
1. AML	AML (non-relapsed and relapsed) Infant AML: see VHR ALL	Not on any tyrosine kinase inhibitor (TKI)** *OR* gemtuzumab in induction phase	*Able to swallow tablets AND ≥13 years OR ≥10 years and ≥30 kg*: Posaconazole **tablets** (**req TDM**) *Not able to swallow posaconazole tablets OR <10 yrs:* Voriconazole **tablets** (preferred) or liquid. **(both req. TDM)**	Echinocandin	***Non-relapsed:*** **START**: following last dose of chemotherapy in cycle (or 5 days post Gemtuzumab) or ANC<0.5 x10^9/L **STOP**: when ANC expected to remain ≥0.5 x10^9/L for at least 7 days ***Relapsed:*** **START**: at relapse diagnosis **STOP:** continue until HSCT then manage as per (6) Allogeneic HSCT
		On any TKI** *OR* gemtuzumab in induction phase	Echinocandin	L-amphotericin B (3x/wk)	
2. ALL	Relapsed ALL	Not on weekly vincristine *OR* any TKI**	Voriconazole* tablets (preferred) or liquid. **(both req. TDM)** *withhold the day before, day of and day after vincristine	L-amphotericin B (3x/wk)	**START**: at relapse diagnosis **STOP:** ***Remission achieved and not planned for allo-HSCT*:** Continue as per VHR ALL ***Remission not achieved or planned for allo-HSCT*:** Continue until HSCT then manage as per (6) Allogenic HSCT (if prior IFI will need targeted 2^{ry} prophylaxis)
		On weekly vincristine *OR* any TKI**	L-amphotericin B (3x/wk)	Echinocandin	

**For RCH patients - Drug Usage Committee (DUC) approval required. For MCH patients - Department of Infection and Immunity approval required.*
***Tyrosine Kinase Inhibitors include (but not limited to):* sorafenib, imatinib, dasatinib, nioltinib, ceritinib, carfizomib, ibrutinib, crizotinib, ruxolitinib

<table>
<tr><th></th><th colspan="2">Specific subgroup</th><th>Recommended prophylaxis</th><th>If recommended agent contraindicated*</th><th>Duration</th></tr>
<tr><td rowspan="5"></td><td rowspan="2">Very high risk (VHR) ALL, T-cell ALL and Infant ALL and AML</td><td><u>Not</u> on weekly vincristine OR any TKI**</td><td>Voriconazole* tablets (preferred) or liquid. (both req. TDM)

*withhold the day before, day of and day after vincristine</td><td>L-amphotericin B (3x/wk)</td><td rowspan="2">START: when ANC <0.5 x10^9/L and during intensive phases only (i.e. Induction, Consolidation and Delayed Intensification phases)

STOP: when ANC expected to remain ≥0.5 x10^9/L for at least 7 days</td></tr>
<tr><td>On weekly vincristine OR any TKI**</td><td>L-amphotericin B (3x/wk)</td><td>Echinocandin</td></tr>
<tr><td rowspan="2">High risk (HR) ALL and lymphoblastic lymphoma</td><td colspan="4">Induction chemotherapy phase – see <u>Very High risk ALL</u> (ie. Mould-active azole or L-amphotericin as first line)</td></tr>
<tr><td colspan="4">Consolidation and Delayed Intensification (DI) phases – Fluconazole as first line (use mould active agent for consolidation in patients upgraded to high-risk protocol, followed by fluconazole in DI)</td></tr>
<tr><td colspan="2">Standard risk (non relapsed) ALL</td><td colspan="3">Routine prophylaxis not required unless patient is reclassified as High risk. If this occurs, follow relevant recommendations above but use mould-active cover for first cycle.
For patients that are re-classified as VHR or HR,</td></tr>
<tr><td rowspan="3">3. Other leukaemia</td><td colspan="2">Biphenotypic leukaemia</td><td colspan="3">See <u>Very High Risk ALL</u> above</td></tr>
<tr><td colspan="2">Myelodysplastic syndrome</td><td colspan="3" rowspan="2">Consider mould active prophylaxis during induction phase chemotherapy if chronic neutropenia as per <u>Very High Risk ALL</u> above</td></tr>
<tr><td colspan="2">Juvenile myelomonocytic leukemia (JMML)</td></tr>
<tr><td>4. Lymphoma</td><td colspan="2">Excluding patients undergoing any HSCT or lymphoblastic lymphoma</td><td colspan="3">Routine prophylaxis not required
For lymphoblastic lymphoma – <u>see High Risk ALL</u></td></tr>
</table>

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Disease	Specific subgroup		Recommended prophylaxis	If recommended agent contraindicated*	Duration
5. Aplastic anaemia	Severe aplastic anaemia		*Able to swallow tablets AND ≥13 years OR ≥10 years and ≥30 kg*: Posaconazole **tablets** (**req TDM**) *Not able to swallow posaconazole tablets OR <10 yrs:* Voriconazole **tablets** (preferred) or liquid. **(both req. TDM)**	L-amphotericin B (3x/wk)	**START**: if prolonged severe neutropenia (ANC <0.5 x10^9/L) expected **STOP**: when ANC expected to remain ≥0.5 x10^9/L for at least 7 days
6. Allogeneic HSCT	Pre-engraftment phase	No prior invasive fungal infection	Fluconazole	Echinocandin	**START**: during conditioning phase **STOP**: consider stopping from day +75 onwards and CD4 >0.2
		Prior invasive fungal infection	Mould-active secondary prophylaxis may be required. Discuss with ID		
	Post-engraftment phase	No GvHD	Routine prophylaxis not required		
		Severe acute GvHD (steroid dependent or grade II-IV) Extensive chronic GVHD	*Able to swallow tablets AND ≥13 years OR ≥10 years and ≥30 kg*: Posaconazole **tablets** (**req TDM**) *Not able to swallow posaconazole tablets OR <10 yrs:* Voriconazole **tablets** (preferred) or liquid. **(both req. TDM)**	*Contraindication to azoles*: Echinocandin if in hospital or L-amphotericin B (3x/wk) if at home	**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 pred equivalent.*
7. Autologous HSCT	When expected ANC <0.5 x10^9/L for >10 days		Fluconazole	*Contraindication to fluconazole*: Echinocandin	**START**: following last dose of chemotherapy in cycle **STOP**: when ANC expected to remain ≥0.5 for at least 7 days

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Disease	Specific subgroup	Recommended prophylaxis	If recommended agent contraindicated*	Duration
8. CAR-T	No prior invasive fungal ifnection and not relapsed within 12 months HSCT	Fluconazole	Echinocandin	**START**: during lymphodepletion **STOP**: day +30 and ANC remains ≥0.5 x10^9/L for at least 7 days **If prior IFI:** discuss duration with ID
	Any of: Relapsed within 12 months of HSCT, CRS requiring tocilizumab, ICANS requiring high dose steroids.	*Able to swallow tablets AND ≥13 years OR ≥10 years and ≥30 kg*: Posaconazole **tablets** (**req TDM**) *Not able to swallow posaconazole tablets OR <10 yrs:* Voriconazole **tablets** (preferred) or liquid. **(both req. TDM)**	Echinocandin	
8. Solid tumours	Neuroblastoma stage IV	Fluconazole (until neutropenia recovers)	L-amphotericin B (3x/wk)	**START**: following last dose of chemotherapy in cycle **STOP**: when ANC expected to remain ≥0.5 x10^9/L for at least 7 days
	All other solid tumours	Routine prophylaxis not recommended		

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