



11th EUROPEAN CONFERENCE on INFECTIONS in LEUKAEMIA



► **CONFERENCE**
From September
17th to 19th, 2026

Revised Guidelines slide set
September 2026

Recommendations from the 11th European Conference on Infections in Leukaemia:

Prevention and Management of Infections in Patients Receiving Chimeric Antigen Receptor (CAR) T-cell Therapies and Bispecific Antibodies (BsAb)

Group members in alphabetical order:

Eleftheria Kampouri (leader) (Switzerland), Lidia Gil (co-leader) (Poland), Roy Chemaly (US), Joshua A. Hill (US), Gloria Iacoboni (Spain), Nina Khanna (Switzerland), Thomas Lehrnbecher (Germany), Jessica S. Little (US), Malgorzata Mikulska (Italy), Kai Rejeski (Germany), Jan Styczynski (Poland), Benjamin W. Teh (Australia), Carla Walti (Switzerland)



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Outline

1. Screening
2. Antibacterial prophylaxis
3. Fungal infections - prevention and management
4. Viral infections - prevention and management
5. Immunoglobulin replacement



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Recommendations from the 11th European Conference on Infections in Leukaemia:

Screening prior to CAR T-cell therapies and BsAb

Malgorzata Mikulska, Roy Chemaly, **Lidia Gil**



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ID screening prior to CAR-T or BsAb therapy - 1

Recommendations	Grade
1. Provide a written protocol for screening prior to CAR T-cell therapies and BsAb	good clinical practice recommendation
Before leukapheresis or at initial evaluation for BsAb treatment	
2 . Review the past medical history of infectious complications, in particular: ○ Previous opportunistic infections (evaluate the need for secondary prophylaxis) ○ Previous IFD (evaluate the need for secondary prophylaxis) ○ Previous resistant / recurrent bacterial or viral infections (evaluate the need for secondary prophylaxis or targeted empirical treatment)	good clinical practice recommendation



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ID screening prior to CAR-T or BsAb therapy - 2

Recommendations	Grade
3. Review the previously performed serologies (e.g., at the time of diagnosis), and perform the following if previously negative, not performed or not available:	
CMV	Allu
EBV	CIII
VZV/HSV, particularly if expected to influence the approach to prophylaxis	CIIIt
Toxoplasma	Allt
Consider the risk of false positive results in case of previous Ig administration, and false negative results in patients with multiple previous lines of therapy	

Coherent with previous ECIL Toxoplasma guidelines: Aerts et al. Lancet ID 2024



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ID screening prior to CAR-T or BsAb therapy - 3

Recommendations	Grade
4. The following serologies are recommended:	
○ HIV, if serology positive, perform HIV-RNA	Allt
○ HBV, HBsAg, HBsAb, HBcAb; if any positive perform HBV-DNA	Allu, t
○ HCV, if serology positive, perform HCV-RNA	Allu, t

Coherent with previous ECIL hepatitis guidelines: Mikulska et al. Lancet Hem 2025



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ID screening prior to CAR-T or BsAb therapy – 4

Risk-adapted screening

Recommendations	Grade
5. Risk-adapted screening is recommended for locally relevant infections based on local epidemiology and patient's risk factors (including travel history)	Allt
5a. Assessment for latent tuberculosis, preferably with IGRA, is recommended in at risk patients in whom tuberculosis prophylaxis will be provided (based on the prognosis and patients' characteristics, especially age)	Allt
5b. Consider screening for multi-drug resistant pathogens based on local epidemiology (e.g., CRE, ESBL)	No Grade
5c. Screening with serology is recommended if not performed at disease onset or if risk factors have emerged since previous screening: • <i>Strongyloides</i> (if indeterminate results, PCR, 3 ova and parasite stool examinations or culture for larvae can be performed) * • HTLV • Chagas disease • <i>Treponema pallidum</i> infection • Coccidioidomycosis (other endemic mycosis only in case of previous infection or compatible symptoms) • Visceral leishmaniasis (together with PCR) * • Schistosomiasis *	Allu-t
5d. Screening with Plasmodium PCR for malaria Any other endemically relevant infections	
Coherent with previous ECIL TB guidelines: Bergeron et al. Lancet Hem 2025; WBMT review on endemic or regionally limited infections - Muhsen et al. Lancet Hematol 2023; expert review: Hill JA and Seo SK. Blood 2020 and selected relevant papers: Sánchez-Montalvá et al. Am. J. Trop. Med. Hyg. 2016, Czech et al. TID 2025; Abad et al. Clin Transplant. 2022	

Recommendations from the 11th European Conference on Infections in Leukaemia:

Antibacterial prophylaxis after CAR T-cell therapies and BsAb

Gloria Iacoboni, Kai Rejeski, Malgorzata Mikulska, **Lidia Gil**



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Risk Factors for Severe Bacterial Infection

Higher Risk

- High CAR-HematoTox (HT) score
- Prolonged severe neutropenia (ANC<500 cells/mm³ for ≥10d)
- Prolonged corticosteroids (10mg/day dexamethasone for >7 days or ≥20 mg prednisone equivalent for >2 weeks)

Patients in outpatient management (higher risk setting) might be considered at higher risk for severe outcomes



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Bacterial Prophylaxis after CAR T-cell Therapy

Intervention	Grade
Primary Prophylaxis	
Antibacterial prophylaxis is not recommended for CAR T-cell recipients at low risk of severe bacterial infection.	DIIu
Antibacterial prophylaxis (fluoroquinolone) could be considered in patients at elevated risk (previously defined risk factors) or in outpatient management.	CIIu-t
Timing: If used, initiate at start of neutropenia and continue until neutrophil recovery (ANC $\geq 500/\mu\text{L}$).	CIIu



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Bacterial Prophylaxis after BsAb

Intervention

Grade

Primary Prophylaxis

Antibacterial prophylaxis is not recommended for patients receiving bispecific antibody therapy.

DIII



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Recommendations from the 11th European Conference on Infections in Leukaemia:

Fungal infection prevention and management after CAR T-cell therapies and BsAb

Jessica Little, Nina Khanna, Lidia Gil,
Thomas Lehrnbecher, Jan Styczynski



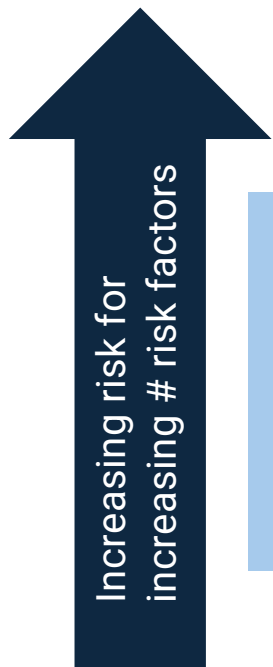
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Figure 1: Risk Factors for Invasive Mold Infection (IMI)



Risk Factors

- History of IMI
- Prolonged severe neutropenia (ANC<500 cells/mm³ for ≥10d)
- Prolonged corticosteroids (10mg/day dexamethasone for >7 days or ≥20 mg prednisone equivalent for >2 weeks)



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Antifungal Prophylaxis (*non-PjP*) after CAR T-cell Therapy

Intervention	Grade
Primary Prophylaxis	
Antifungal prophylaxis is not routinely recommended for patients without risk factors for IMI.	DIIu
Anti-yeast prophylaxis may be considered during periods of severe neutropenia.	No Grade
Consider anti-mold prophylaxis for patients with one or more risk factors for IMI.	BIIu
Initiate anti-mold prophylaxis at time of risk factor identification and continue until resolution of presumed risk.	No Grade
Secondary Prophylaxis	
Consider secondary anti-mold prophylaxis in patients with prior history of IMI.	BIIu



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Pneumocystis Prophylaxis after CAR T-cell Therapy

Intervention	Grade
Primary Prophylaxis	
Prophylaxis against <i>Pneumocystis jirovecii</i> is recommended.	Allu
Start at time of CAR T-cell infusion and continue until minimum 12 months post CAR T-cell infusion.	Allt
Consider continuing until CD4 count >0.2 G/L.	BIIt



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Antifungal Prophylaxis (*non-PjP*) after Bispecific Antibodies

Intervention

Grade

Primary Prophylaxis

Antifungal prophylaxis is not routinely recommended for patients without risk factors for IMI.

DIIu

Secondary Prophylaxis

Secondary anti-mold prophylaxis could be considered in patients with prior history of IMI.

CIIt



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Pneumocystis Prophylaxis after Bispecific Antibodies

Intervention	Grade
Primary Prophylaxis	
Prophylaxis against <i>Pneumocystis jirovecii</i> is recommended.	Allu
Start at time of bispecific antibody infusion and continue for minimum 6 months after cessation of the therapy.	Allu
Continuing until CD4 count >0.2 G/L could be considered.	CIIt



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Recommendations from the 11th European Conference on Infections in Leukaemia:

Viral infection prevention and management after CAR T-cell therapies and BsAb

Eleftheria Kampouri, Nina Khanna, Roy Chemaly, Joshua A. Hill



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CMV



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CMV PREVENTION IN PATIENTS TREATED WITH CAR T-CELL THERAPY

Recommendations	Grade
Before start of therapy	
Consider CMV PCR testing before CAR T-cell infusion in all CMV-seropositive patients.	BIu
After start of therapy	
Weekly monitoring for CMV DNAemia could be considered for up to 6 weeks after CAR T-cell infusion in all CMV seropositive patients.	CIIu
Monitor weekly in patients with risk factors (i.e., corticosteroid treatment for CRS and/or ICANS, BCMA-targeted therapy) or prior CMV reactivation.	BIu
Use preemptive antiviral therapy in cases of increasing ($\geq 1 \log_{10}$ fold increase over 5-7 days) or high-level (as per institutional definitions) CMV DNAemia.	BIu
Based on available data CMV prophylaxis for CMV seropositive patients is not currently recommended.	



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CMV PREVENTION IN PATIENTS TREATED WITH BsAb

Recommendations	Grade
Before start of therapy	
Consider CMV PCR testing before BsAb initiation in all CMV seropositive patients*	BIIu
After start of therapy <i>New from prior ECIL</i>	
<u>Multiple myeloma</u> : Monitoring for CMV DNAemia could be considered weekly during step-up dosing and then at each cycle for the first 3 months**.	CIIu
<u>NHL</u> : Monitoring for CMV DNAemia could be considered weekly during step-up dosing and then at each cycle for the first 3 months**.	CIII
<u>B-ALL</u> : In adult patients treated with blinatumomab weekly monitoring is optional for the first 4 weeks.	No grade
During this early period, if universal monitoring is not performed, monitor weekly in patients with risk factors (i.e., corticosteroid treatment for CRS and/or ICANS, BCMA-targeted therapy) or prior CMV reactivation.	BIIu
Based on available data CMV prophylaxis for CMV seropositive patients is not currently recommended.	No grade
Use preemptive therapy in cases of increasing ($\geq 1 \log_{10}$ fold increase over 5-7 days) or high-level (as per institutional definitions) CMV DNAemia.	BIIu

*this does not apply to pediatric B-ALL

**Range of CMV detection after BsAb 0–209 days but IQR usually up to 90 days which means that 3 months should capture 75% of episodes.

Important note: Risk of false positives in patients with IgRT, and false negatives in patients with MM and extensive prior therapies



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HSV/VZV



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HSV/VZV PREVENTION IN PATIENTS TREATED WITH CAR T-CELL THERAPY AND BsAb

Recommendations	Grade
CAR T	
Prophylaxis against HSV and VZV with valacyclovir or acyclovir is recommended.	Allu
Start at lymphodepletion chemotherapy and continue until minimum 12 months post-CAR-T cell infusion.	Allt
Continuing until CD4 count >0.2 G/L could be considered.	CIIt
BsAb	
Prophylaxis against HSV and VZV with valacyclovir or acyclovir is recommended.	Allu
Start at time of bispecific antibody infusion and continue for minimum 6 months after cessation of therapy.	Allt
Continuing until CD4 count >0.2 G/L could be considered.	CIIt

***Important footnote:** Long-term prophylaxis is indicated for VZV reactivation (not HSV which is primarily observed early). However, in the absence of routine serology for VZV and HSV in all centers, simplified approach adopted. In case of breakthrough HSV infection, resistance testing should be considered



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HHV-6



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HHV-6 MANAGEMENT IN PATIENTS TREATED WITH CAR T-CELL THERAPY AND BsAb

Recommendations	Grade
CAR T	
No routine HHV-6 monitoring is recommended before or after CAR T-cell infusion.	DIIu
Routine preemptive therapy based on detection of HHV-6 in blood samples is not recommended after CAR T-cell therapy due to insufficient evidence to support the efficacy of preemptive intervention and no established thresholds.	DIII
HHV-6 diagnostic testing (including PCR in blood and CSF) is recommended in patients with compatible neurological symptoms or imaging findings not resolving with ICANS management.	Allu
BsAb	
No routine HHV-6 monitoring is recommended before or after bispecific therapy initiation	DIII
Routine preemptive therapy based on detection of HHV-6 in blood samples is not recommended due to insufficient evidence to support the efficacy of preemptive intervention and no established thresholds.	DIII
HHV-6 diagnostic testing (including PCR in blood and CSF) is recommended in patients with compatible neurological symptoms or imaging findings not resolving with ICANS management.	Allt

Footnote: specific quantitative PCR testing should be performed in CSF for positive results from multiplex CSF meningitis/encephalitis PCR panels; in case of negative multiplex PCR testing, specific PCR only in case of high clinical suspicion. Endogenous HHV-6 (previously known as iciHHV-6) should be tested for and ruled out in case of positive test.

EBV



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EBV MANAGEMENT IN PATIENTS TREATED WITH CAR T-CELL THERAPY AND BsAb

Recommendations	Grade
No routine EBV monitoring is recommended before or after therapy initiation based on the limited data currently available.	DIII
Test for EBV (PCR in blood) in patients with clinical suspicion (lymphadenopathy, persistent cytopenias or other unexplained symptoms, severe or prolonged immune dysfunction, or prior EBV DNAemia).	BIIt

Footnote: One study reported a higher EBV reactivation rate in patients with B-ALL following allogeneic HCT and blinatumomab, without a significant increase in PTLD or mortality. No specific recommendation for EBV monitoring in this population was issued.



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COVID-19 AND OTHER RVIs



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RVI (*incl. COVID-19*) MANAGEMENT IN PATIENTS TREATED WITH CAR T-CELL THERAPY AND BsAb –Refer to ECIL-10

Recommendations	Grade
In patients with respiratory symptoms, use of molecular assays (NAAT assays) for respiratory viruses is recommended.	Allu
Screening of asymptomatic patients is not recommended*.	DIIu
Consider deferral of therapy depending on severity of symptoms, viral pathogen and the urgency of the underlying malignancy, balancing the risks and benefits of delaying treatment (<i>Refer to ECIL-10</i>).	BIIt
Retesting of nasopharyngeal samples is not routinely recommended in CAR-T and BsAb candidates who have clinically recovered from respiratory viral infections prior to initiation of therapy.	No grade
Pausing or discontinuing BsAb could be considered on case by case basis with ID consultant and hemonc specialist.	No grade
Antiviral treatment for COVID-19 is recommended (<i>Refer to ECIL-10</i>).	Allu
Consider post-exposure prophylaxis for COVID-19 in line with updated local recommendations.	BIIt
Antiviral therapy is recommended for influenza (<i>Refer to ECIL-10</i>).	Allu
Post-exposure prophylaxis with oseltamivir preferably within 48 hours is recommended (<i>Refer to ECIL-10</i>).	AIIt
Antiviral therapy with oral ribavirin could be considered for RSV (<i>Refer to ECIL-10</i>)	CIIt

*may be considered in selected cases (e.g., COVID-19 in pediatric population)

Footnote for the text: Pulmonary function tests may be warranted 1-2 months after recovery from respiratory viral infections to rule out bronchiolitis obliterans syndrome or airflow decline.

Refs ECIL-10: Cesaro S et al, Leukemia 2025, <https://doi.org/10.1038/s41375-025-02649-9>; Von Lilienfeld-Toal M et al, Lancet Infect Dis 2026, [https://doi.org/10.1016/s1473-3099\(25\)00365-2](https://doi.org/10.1016/s1473-3099(25)00365-2); Hayden FG et al, N Eng J Med 2026, <https://doi.org/10.1056/nejmoa2509306>

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HBV, HCV, HIV



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HBV MANAGEMENT IN PATIENTS TREATED WITH CAR T-CELL THERAPY AND BsAb

Recommendations	Grade
Before start of therapy	
In patients with positive HBsAg or anti-HBc serology, nucleic acid testing (HBV DNA) is recommended.	Allu
Refer patients with positive HBV-DNA to a specialist.	BIIt
After start of therapy	
Antiviral prophylaxis* is recommended for patients with chronic (HBsAg-positive) or resolved (anti-HBc-positive) HBV infection and should be continued for at least 12 months after CAR-T cell therapy or after the last dose of bispecific antibody therapy.	Allu
If antiviral prophylaxis is not used in patients with resolved HBV infection (anti-HBc positive, HBsAg and HBV DNA negative), monitoring of HBV-DNA and ALT every 1-3 months is recommended for at least 12 months after CAR T-cell therapy or the last dose of bispecific antibody therapy. Pre-emptive antiviral therapy is recommended upon detection of HBV reactivation.	Allu

*Nucleos(t)ide analogues include entecavir (0.5 mg orally once daily), tenofovir disoproxil fumarate (300 mg orally once daily), or tenofovir alafenamide (25 mg orally once daily). Recommendations aligned with ECIL 9; Mikulska et al, Lancet Haematol 2025.

Important footnote: Risk of false positives if patients received IgRT, as well as false negatives, particularly in patients with multiple myeloma with extensive prior therapies.



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HCV AND HIV IN PATIENTS TREATED WITH CAR T-CELL THERAPY AND BsAb

Recommendations	Grade
HIV infection should not be considered a contraindication to therapy. In patients with HIV infection, appropriate antiretroviral therapy and HIV-specific management in collaboration with an HIV specialist are recommended concomitantly with CAR T-cell therapy and/or BsAb therapy.	Allt
In patients with positive anti-HCV serology, nucleic acid testing (HCV RNA) is recommended.	Allu
Refer patients with positive HCV-RNA to a specialist to determine the optimal timing of direct-acting antiviral therapy and appropriate monitoring.	BIIt

Important footnote: Must account for false positives if patients received IgRT, as well as false negatives, particularly in patients with multiple myeloma with extensive prior therapies.



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Recommendations from the 11th European Conference on Infections in Leukaemia:

Immunoglobulin replacement in patients treated with CAR T-cell therapies and BsAb

Thomas Lehrnbecher, Joshua Hill, Carla Walti, Eleftheria Kampouri,
Benjamin Teh



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Immunoglobulin Replacement Therapy in Patients Receiving CAR T-Cell Therapy

Recommendations	Grade
In patients receiving CAR T	
Ig replacement in the setting of hypogammaglobulinaemia is recommended with prior episodes of severe and/or recurrent infection*.	Allt-u
In patients with myeloma receiving BCMA CAR T	
In the absence of prior infections, Ig replacement in the setting of hypogammaglobulinaemia** could be considered.	CIIu

NB:
prior infection = period following onset of hypogammaglobulinaemia
* *Invasive bacterial and/or documented or presumptive bacterial sino-pulmonary infection.*
**Assessment of hypogammaglobulinaemia needs to take into account paraprotein levels in patients with myeloma



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Immunoglobulin Replacement Therapy in Patients Receiving BsAbs

Recommendations	Grade
In patients receiving BsAb therapy	
Ig replacement in the setting of hypogammaglobulinaemia is recommended with prior episodes of severe and/or recurrent infection*.	Allt-u
In patients with myeloma receiving BCMA BsAb	
In the absence of infection, consider Ig supplementation either: at a pre-defined immunoglobulin level threshold (e.g., <4g/L)** or regardless of levels	BIlu

NB:

prior infection = period following onset of hypogammaglobulinaemia

* *Invasive bacterial and/or documented or presumptive bacterial sino-pulmonary infection.*

**Assessment of hypogammaglobulinaemia needs to take into account paraprotein levels in patients with myeloma



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Dosing

Dosing	Frequency
Intravenous: 300-500mg/kg 10-20g starting dose with dose adjustment to achieve levels >4g/L Subcutaneous: 75-125mg/kg	4-8 weeks Weekly



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