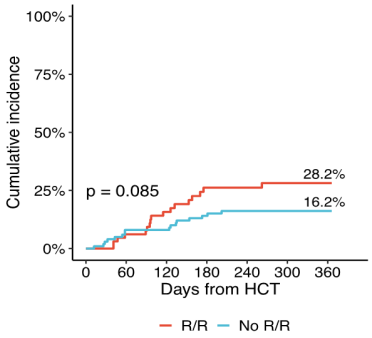
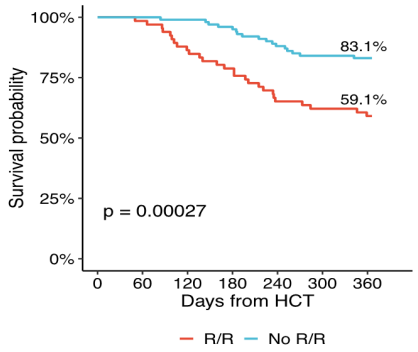
Figure 2. Cumulative incidence curves of CMV end-organ disease (EOD) at 1-year post HCT



Time to EOD (days)	Median	IQR
R/R	97	(89-153)
No R/R	91	(40-140)

Figure 3. Kaplan-Meier survival curves of overall survival (OS) at 1-year post HCT



Time to Death (days)	Median	IQR
R/R	169	(104-227.5)
No R/R	215	(180-250)

Conclusion. 1) Refractory and/or resistant CMV occurred in 39,5% of PET recipients. 2) T-cell depletion and higher CMV VL at PET initiation were risk factors for R/R CMV in multivariable models. 3) R/R CMV was associated with more EOD and worse overall survival.

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1105. The Burden of Infections Prior to Chimeric Antigen Receptor (CAR) Modified T-cell Therapy Predicts Post-CAR T-cell Infectious Complications

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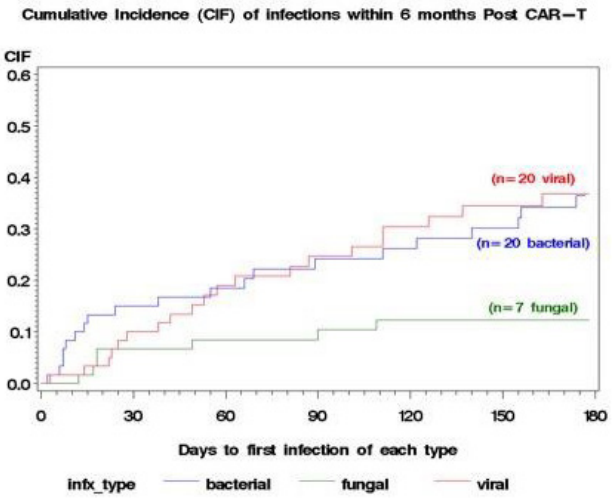
Session: P-49. Infections in Immunocompromised Individuals

Background. CAR T -cell therapy (CTT) is a novel treatment for B-cell cancers. CTT patients (pt) are at risk of infection due to neutropenia, cytokine release syndrome (CRS), and CAR T-cell related encephalopathy syndrome (CRES), which are treated with steroids and tocilizumab (anti-IL-6). This is a single-center study evaluating the risk factors for infection after CTT.

Methods. A retrospective review was conducted of 60 consecutive CTT recipients between 7/17/17 and 9/5/19. Data was collected from 6 months (mo) pre- and at least 6 mo post-CTT. Data was censored for death, additional chemotherapy, or loss to follow up. Cox proportional hazard and Poisson regression were used.

Results. Median age was 66 (23-84) years; 48% (29) were female. The most common cancer was non-Hodgkin lymphoma (89%, 54). 25% (15) had a prior stem cell transplant (SCT). 73% (44) and 45% (27) of pts developed CRS and CRES, respectively. 43% (26) received steroids; 65% (39) received tocilizumab. In the 6 mo pre-CTT, 39 infections occurred in 45% (27) of pts. 103 infections occurred in 66% (40) after CTT; 33 (55%) had an infection within 6 mo. Infections were bacterial (52%; 54/103), viral (30%; 37/103), fungal (10%; 10/103), mycobacterial (1%; 1/103), protozoal (1%; 1/103). Cumulative incidence of infection in the first 6 mo are shown in **Fig 1**. All-cause and infection-related mortality were 32% (19) and 15% (9), respectively. Mortality among pts with fungal infections was 20% (2/10). Infection density was 1.28 and 0.58 infections per 100 pt-days between days 0-30 and 30-89, respectively. Factors associated with infection post CTT were number (no.) of infections in the 6 mo prior to infusion (HR 1.62, CI [1.1-2.38]; p=0.015), no. of lines of therapy in the 6 mo pre-CTT (HR 1.52, CI [1.01-2.27]; p=0.04), prior allogeneic SCT (HR 5.96, CI [1.34-26.47]; p=0.019), and no. of tocilizumab doses. Grade 1 CRS and grade 2 CRES were risk factors between days 0-30 and 0-180, respectively (HR 4.67, CI [1.02 -21.4], p = 0.047; HR 2.48, CI [1.17-5.23], p = 0.02).

Fig 1: Cumulative Incidence of Infection 6 Months Post CAR T-cell Therapy



Conclusion. Infections after CTT are common. Infection before CTT was associated with risk of infection after CTT. Pt selection may ameliorate this risk. Mortality due to fungal infections was high. Randomized-controlled trials of antifungal prophylaxis in high-risk pts are needed.

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1106. The incidence and risk factors associated with varicella zoster virus infection in kidney transplant recipients after 1-month acyclovir prophylaxis in a CMV preemptive therapy era

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Session: P-49. Infections in Immunocompromised Individuals

Background. Varicella zoster virus (VZV) infection is a well-known opportunistic infection in solid organ transplant recipients. Since the various strategies of the use of anti-herpetic drugs including ganciclovir or acyclovir have evolved, the epidemiology of VZV infection is changing. However, there are limited data on the recent incidence and risk factors of post-transplant VZV infection in popular preemptive ganciclovir era for CMV infection. We evaluated the incidence, risk factors and clinical characteristic of patients with development of post-transplant VZV infection in kidney transplant (KT) recipients after 1-month acyclovir prophylaxis in the hospital that adopted preemptive ganciclovir therapy for CMV infection.

Methods. All adult patients with seropositive CMV antibody admitted to a KT unit from January 2014 to December 2017 were retrospectively reviewed in a tertiary-care hospital in South Korea. Our hospital adopted preemptive ganciclovir therapy for CMV infection in all CMV seropositive KT recipients. We administered acyclovir prophylaxis for 1-month to CMV seropositive KT recipients. The primary endpoint was VZV infection development after KT.

Results. A total of 1295 KT recipients was followed up for 4295.8 person-years. The median follow-up period was 46.6 months (interquartile range (IQR) 34.3-59.5). Of the 1295 recipients, 100 (7.7%, 2.33 per 100 person-years, 95% confidence interval (CI) 1.89-2.83) patients developed VZV infection after KT. The median time for VZV infection development was 9.5 months (IQR 4.7-22.1). All patients had VZV-associated