Background: Little is known about the prevention practices used by HCT centers internationally to prevent herpesvirus and fungal infections. The purpose of this survey was to compare prevention strategies by geographic region, center size and patient population (pediatric vs. adult). **Methods:** A web-based questionnaire was distributed to Program Directors at CIBMTR-affiliated HCT centers to elicit information on the strategies used to prevent HSV, VZV, CMV and fungal diseases at each institution between 1999 and 2003. **Results:** The response rate was 80% (n = 174) from HCT centers in 32 countries, including the US/Canada (n = 96), Europe (n = 40), Australia and New Zealand (n = 13), Latin America (n = 12), Asia (n = 6), the Middle East (n = 4) and South Africa (n = 3). While short-course acyclovir (ACV) for HSV prophylaxis was used almost uniformly, 62% of centers routinely used prophylactic low-dose ACV or similar agents as prophylaxis against VZV; of these, 19% treated for 1 month or less, 29% for 3–4 mos., 9% for 6–9 mos., 26% for 12 mos. and 17% until off immunosuppressants or until immune reconstitution. Strategies to prevent CMV disease in seropositive recipients were used in the following proportions: high-dose ACV/VACV alone (3%), Ganciclovir-based (GCV) prophylaxis alone (5%), surveillance and preemptive therapy (PET) alone (47%) or a combination strategy (45%) most commonly high-dose ACV and PET. The prevention strategies used in Europe were very similar to those used in the US with the exception of high-dose ACV/VACV which was used routinely by 48% of European centers compared with 25% of US centers ($P < .05$, Fisher exact test). In Australia and NZ (grouped together), GCV prophylaxis was used in higher proportions than in the US, Europe and Canada (54% vs. 23%, $P < .05$). Routine antifungal prophylaxis was used by 78% and 57% of European and Canadian centers, respectively, compared with its use in the US (97%), Australia/NZ (100%), and Latin America (100%). Also, antifungal prophylaxis was more commonly used in pediatric centers than in adult-only centers (97% vs 85%). Practices among smaller centers were remarkably similar to those in high-volume centers (>50 HCTs annually). Other trends in prevention strategies will be presented at the conference. **Conclusion:** This large analysis sheds light on current practices being employed globally to prevent herpesvirus and fungal diseases in HCT recipients and highlights previously unknown differences in prevention strategies.

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IMPACT OF RIBAVIRIN THERAPY ON RESPIRATORY SYNCITIAL VIRUS INFECTION FOLLOWING HEMATOPOIETIC CELL TRANSPLANTATION

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Respiratory syncitial virus (RSV) infections are associated with high morbidity and mortality among hematopoietic cell transplantation (HCT) recipients. We conducted a retrospective cohort study to determine the impact of ribavirin therapy on RSV infection, defined as respiratory symptoms with a nasopharyngeal (NP) or bronchial lavage positive RSV assay/culture. Of 3648 HCT recipients between January 1986 and August 2005, 109 (median age 32 years, range 0.6–64) were diagnosed with RSV infection; the overall incidence was 3% (95% confidence intervals [CI], 2.5–3.6%). Sixty-nine patients received aerosolized ribavirin therapy (RT) and 40 did not (noRT). Median follow-up was 1.1 (range 0–18.6) years and 4.7 (range, 0–20.0) years for the RT and noRT groups ($p = .01$), respectively. The two groups were comparable with respect to age, conditioning regimen, gender, donor type, underlying disease, cytomegalovirus serology, transplant year, GVHD prophylaxis and incidence, time to neutrophil recovery, NP swab positive assay/culture and evidence of co-infections at time of diagnosis of RSV infection. RT patients had a shorter time from transplant to RSV diagnosis (63 vs. 159 days, $p < 0.01$), were less likely to have neutrophil engraftment (66% vs. 85%, $p = 0.02$), and were more likely to have lower respiratory infection (LRI) as evidenced by pulmonary infiltrates on CXR (80% vs. 27%, $p < 0.01$). RSV infection resolved in 44 patients (63%) of the RT group compared with 37 (90%) patients in the noRT group ($p = 0.01$); RSV related deaths occurred in 15 (21%) RT patients and 1 (2%) noRT patient. In the RT group, patients who failed therapy were more likely to have LRI (96% vs. 68%, $p < 0.01$), lack of neutrophil engraftment (46% vs. 77%, $p = 0.01$), shorter time from transplant to RSV diagnosis (17 days vs. 79 days, $p = 0.01$) and presence of co-infections (54% vs. 16%, $p < 0.01$). Multivariate analysis revealed the presence of co-infections as the only predictive factor in lack of resolution of RSV infection in the RT group (relative risk 2.54, 95% CI 1.49–4.3). We conclude that RSV infected patients with neutrophil engraftment and no evidence of LRI often improve without ribavirin therapy and can be closely monitored. In contrast, mortality remains high despite ribavirin therapy in patients with LRI, lack of engraftment, and co-infections.

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CHRONIC HEPATITIS C, CIRRHOSIS, AND END STAGE LIVER DISEASE AMONG 30-YEAR SURVIVORS OF BONE MARROW TRANSPLANT

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Introduction: For long-term survivors who received a bone marrow transplant (BMT) before the discovery of hepatitis C virus (HCV), chronic HCV infection is a common complication. We evaluated a cohort of BMT recipients from the pre-HCV screening era to determine the frequency of progression to cirrhosis and End Stage Liver Disease (ESLD) along with relevant risk factors. **Methods:** We reviewed the course of a total of 134 patients transplanted at the Fred Hutchinson Cancer Center (FHCRC) in Seattle, WA before June 1978 who survived over 10 years after BMT. We retrospectively collected data using the FHCRC Long-Term Follow-Up database, which includes data from periodic on-site examinations, all available outside records, laboratory tests, and yearly questionnaires. *A priori* risk factors thought to be associated with cirrhosis and ESLD were assessed using chi-squared and Wilcoxon-rank sum analyses. **Results:** A total of 134 patients met criteria for inclusion in the study, of which 9 were lost to follow-up, leaving 125 evaluable patients. 82 (66%) were still alive at a median 28.6 years (24.0–35.5); 43 (34%) had died at a median 20.4 years (10.1–31.9). HCV status was known in 94 survivors: 58 (62%) were HCV-infected patients, of whom 7 cleared the virus. Among 51 chronically HCV-infected patients, 34 (67%) developed chronic liver disease. Cirrhosis developed in 14/51 (27%) of these chronically infected patients, 10 of whom progressed to ESLD. Four total ESLD patients underwent orthotopic liver transplant, 3 for decompensated cirrhosis and 1 for cirrhosis with hepatocellular carcinoma (HCC). One other patient with ESLD developed HCC. Cirrhosis ($p < 0.01$) and ESLD ($p = 0.02$) were associated with HCV status, but not with gender, age at transplant, diagnosis, conditioning therapy, post-BMT immunosuppression, hepatitis B status, history of graft-versus-host-disease, or history of sinusoidal obstruction syndrome. **Conclusions:** In this unique cohort of long-term survivors of BMT with over 30 years of follow-up, a large portion of patients were infected with HCV and most developed chronic HCV infection. Those with chronic infection are at high risk of developing cirrhosis and ESLD. Our data indicate that HCV infection is a significant cause of morbidity and mortality in these patients.

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PEGFILGRASTIM (P) APPEARS TO BE EQUIVALENT TO MULTIPLE DAILY DOSES OF FILGRASTIM (F) TO TREAT NEUTROPENIA POST-AUTOLOGOUS PERIPHERAL BLOOD STEM CELL TRANSPLANT (PBSCT) IN PATIENTS WITH NON-HODGKIN'S LYMPHOMA: RESULTS OF A RANDOMIZED PHASE II TRIAL

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Filgrastim has previously been shown to decrease the time to neutrophil recovery following autologous PBSCT. Therefore, it was hypothesized that a single injection of pegfilgrastim (P) would