Aldrovandia (2), neuroblastoma (2) and 1 osteopetrosis and 1 medulloblastoma. Norovirus was detected by RNA RT-PCR test of stool performed by Focus Diagnostics, Cypress, Ca. The dose of Nitazoxanide was 100 mg po BID for ages 1 to 4 years, 200 mg po BID for age 4 to 11 years, and 500 mg po BID for greater than 11 years. 1 pt, 33 months post allo HSCT with normal immune studies was not treated as symptoms resolved prior to test result. All other pts clinically responded with improvements in diarrhea, nausea, and abdominal pain in 2-4 days (median 2 days). 3 pts were pre-HSCT on chemo/immunotherapy and 11 were 17 days to 34 months after HSCT. All the treated pts were on immune suppression or chemotherapy. 9 allo HSCT pts were on immunosuppression and 5 of these had GVHD at onset of symptoms. Immune suppression included tacrolimus/solumedrol (3), cellcept/solumedrol (2) plus infliximab (1), tacrolimus (1), cyclosporine (1), tacrolimus/cellexpt (1). 3 pts were receiving immunotherapy (1), or chemotherapy for solid tumors (2) prior to planned HSCT. 1 pt was 10 months post auto HSCT. Clearance of stool virus was variable. 2/3 pts treated prior to HSCT became negative on stool study within 5-14 days of treatment (1 unknown duration). Among pts treated after HSCT 4/9 had persistent viral shedding. 2 received drug until death (1 adenovirus, 1 CHF) both were treated greater than 2 months, 3 with GVHD still shed virus after 6 months of treatment, and 4 are off therapy and remain negative for norovirus RNA. 1 auto HSCT pt stopped viral shedding 2 months post starting Nitazoxanide. 2 HSCT pts with clinical resolution but persistent viral shedding stopped treatment and had clinical symptoms return. These 3 pts responded to restarting therapy within 2 days but continue to shed virus. UGI endoscopy/colonoscopy were performed in 5 pts at the time of infection, all showed inflammation/edema but no GVHD was seen on histology. Peripheral blood CD4 counts among those with persistent viral shedding ranged from <50-445/ul and for those that cleared virus 143-1222/ul.

Nitazoxanide is effective therapy for norovirus gastroenteritis in immune compromised patients. Therapy needs to be continued until stool RNA studies become negative.

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Safety and Feasibility of Administering Lactobacillus Plantarum to Children Undergoing Myeloablative Hematopoietic Cell Transplantation (HCT)

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Myeloblastic regimens are associated with prolonged periods of cachexia/anorexia, nausea/vomiting, mucositis, and compromised gut integrity (CGI). Studies suggest that CGI could increase the risk of developing acute Graft versus Host Disease (aGVHD). Preserving gastrointestinal integrity may decrease the risk of aGVHD which occurs in approximately 35% of children undergoing allogeneic HCT. Probiotics (nutritional supplements that contain viable microorganisms) have emerged as a possible therapeutic agent in preserving gut integrity. Animal studies have found that administration of probiotics reduced the incidence of aGVHD when compared to placebo. Clinical trials in children with HIV infections and adults receiving organ transplants have found probiotics to reduce morbidity and mortality. Prior to our Pilot Trial, probiotics had not been investigated in the HCT setting. This pilot study evaluated the safety and feasibility of probiotics administered to children undergoing allogeneic HCT. Patients received once daily supplementation with L.plantarum 299v (1 x10^10 CFU/kg/day) beginning on Day – 7 and continued until Day + 14. Thirty-one patients who were undergoing myeloablative allogeneic HCT were enrolled. One patient was not evaluated for safety because only one dose was given and the patient withdrew from the study. Safety: Of 30 evaluable patients, there were no cases of *Lactobacillus plantarum* bacteremia (0% (0/30) with 95% exact binomial CI (0%, 12%)). Feasibility: Of the 31 eligible patients, only one (#12) received <50% of the dose. Therefore, 97% of the eligible patients (30/31), 95% CI (83%-100%), received at least 50% of the probiotic dose. *Clostridium difficile* infections were noted in 20% of the patients by Day + 100. Non-*lactobacillus* bacteremia was noted in 23% of evaluable patients. Three patients died before Day + 100, but no deaths were associated with lactobacillus administration. Stage 1-3 acute gastrointestinal aGVHD was noted in 22% of patients who survived to Day + 100. The overall incidence of Grades II-III GVHD was 26%. No patients had Grade 4 GVHD. Lactobacillus plantarum can safely and feasibly be administered to children undergoing myeloablative HCT.

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Clostridium Difficile Infection in Patients Undergoing Hematopoietic Cell Transplantation. Results from the Transplantation Group at the Catholic University Hospital in Santiago, Chile

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**Introduction:** Patients undergoing hematopoietic cell transplantation (HCT) have an increased risk of *Clostridium difficile* infection (CD). Literature reports CD infection in nearly 20% of transplanted patients. No information about this infection in HCT patients has been reported in Chile.

**Patients and Methods:** We performed a retrospective analysis of 250 patients undergoing HCT at the Catholic University Hospital in Santiago, Chile, between 2000 and 2013. Statistical analysis of the data was conducted using SPSS Statistics v21.

**Results:** Of the 250 transplanted patients studied, 59% (n=147) were allo-HCT and 41% (n=103) were auto-HCT. The mean age was 39 years old (range, 15-69), with a male predominance (151 patients; 60%). Main indications for HCT were acute leukemia (n=104; 42%), multiple myeloma (n=36; 14%) and lymphoma (n=49; 20%). 93% of patients received myeloablative (MA) regimens, and all of them received proton pump inhibitors and prophylactic antibiotics the previous months of the HCT. Of the 250 patients studied, 192 (77%) had at least one episode of diarrhea that required study, among them 13% (n=25) were documented as positive for CD (toxin assay or PCR test), the mean age of this group was 36 years old (range, 18-62), with a male predominance (15 patients, 60%). All of the infected patients had mild to moderate diseases and there were no deaths attributed to it. 80% (n=20) of the infected patients underwent allo-HCT and 20% (n=5) auto-HCT. In the allo-HCT group, 53% had acute lymphoblastic leukemia, 6% acute myeloid leukemia, 24% chronic myeloid leukemia and 12% other causes. In the auto-HCT group, 40% were transplanted due to multiple myeloma, 20% amyloidosis, 20% germinal cancer and 20% acute myeloid leukemia. No patient required total central parenteral nutrition previous to the infection. During the 3 months before HCT, 84% (n=21) of the infected patients used antibiotics including cephalosporins, carbapenem, aminoglycosides and vancomycin. The overall incidence of CD infection in the first week, month and year after transplant, was 4%, 6% and 10%, respectively, with a median time frame from transplantation to infection diagnosis of 20 days. In auto-HCT, 7 days, 30 days and 1 year CD incidence was 2, 3 and 5%, respectively. In allo-HCT, 7 days, 30 days and 1 year CD incidence was 5, 9 and 14%, respectively. There was no significant statistical difference in overall survival (OS) between the infected and non-infected patients one year after the transplant (OS 68% for CD negative vs. 72% for CD positive, p=0.61).

**Conclusions:** In our institution CD infection in patients undergoing HCT had a similar incidence to other reports. Most of cases occur before the first week after HCT (40% of the cases), and the remained stable afterwards. We identified the type of transplant (allo-HCT 3 times higher risk than auto-HCT) and disease (ALL 3 times higher risk than AML) as risk factors for CD infection.

**Introduction:** Nutritional support is pivotal in patients with hematologic malignancies and hematopoietic cell transplantation (HCT). Optimal nutritional status is associated with a shorter time of engraftment and less infection rates during the initial phase. We present our experience in nutritional assessment pre and post transplantation.

**Objective:** To evaluate the possible association between nutritional parameters and outcomes such as overall survival and specific complications, in patients who underwent HCT.

**Patients and Methods:** Retrospective study in patients with HCT between June 2011 and May 2014 in our center. We assessed nutritional status before transplantation and then 10 days after it. Nutritional assessment included anthropometry, body mass index (BMI), albumin, prealbumin and total urinary nitrogen (TUN). Statistical analysis was made using IBM SPSS v.20.

**Results:** We studied a total of 50 patients between June 2011 and May 2014. Media following time: 35 months. Median age was 41 years (18-67), 33 (66%) were male and 17 (33%) female. Thirty two underwent (64%) allogeneic HCT and 18 (36%) autologous HSCT, with 42 undergoing (84%) myeloablative conditioning and 8 (16%) reduced intensity conditioning. Diagnoses included acute leukemia (26), lymphoma (7), multiple myeloma (13), and aplastic anemia (3). Thirty seven patients developed mucositis and 31 required parenteral nutrition (PN). Twenty three patients developed mucositis and required PN (mild: 2, moderate: 20, severe: 1) Incidence of mucositis between allogeneic and autologous HCT that required PN was similar (75% vs 72%). Albumin levels were 4.1mg/dL before and 3.3 mg/dL 10 days after HSCT (p<0.05). No difference was found between BMI, dynamometry and TUN before and after HCT. TUN before HCT was associated with more days of PN (p<0.05). Multivariate analysis showed an association between lower albumin levels after HCT and PN requirement, as well as a longer length of stay. High TUN and lower albumin levels after HCT were associated with longer platelet engraftment time (p<0.05). Longer engraftment time was associated with lower duration of PN (p<0.005). Nine patients (28%) in the allogeneic group developed acute gastrointestinal graft versus host disease (GVHD) that required prolonged PN. No association was found between BMI, albumin, prealbumin, TUN or requirement of PN, with the risk of mucositis or infectious complications. None of the evaluated nutritional parameters were associated with overall survival (OS).

**Conclusion:** High catabolism was associated with a longer length of stay, the requirement of PN and a prolonged platelet engraftment time. Acute gastrointestinal GVHD was associated with more requirement and a longer duration of PN. Nutritional parameters were not associated with any risk of infection and OS.

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**Single Dose Plerixafor and Multi-Day Apheresis: Skip Dosing Enables Cost Efficient Mobilization for Patients Close to Achieving Treatment Goals**

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Plerixafor (P) is highly effective at mobilizing peripheral blood stem cells. Most centers, including our own, have an algorithm that utilizes P in patients who are predicted to have poor collections using G CSF alone, based on peripheral