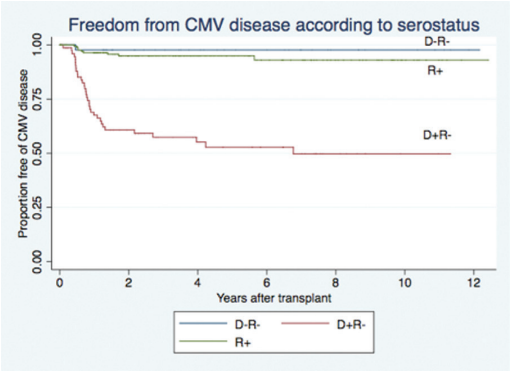

Disclosures. **A. Limaye**, Merk: Consultant and Investigator, Consulting fee and Research grant; Astellas Pharma Inc.: Consultant and Investigator, Consulting fee; Helocyte Inc.: Consultant, Consulting fee.

1570. Infectious Disease (ID) Complications in Immunocompromised (IC) Patients with Cancer Post-Hurricane Harvey at a Comprehensive Cancer Center in 2017

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Background. During 2017, Houston had the most destructive flood-related disaster in recent history due to Hurricane Harvey. Afterward, educational material with information of possible ID problems was provided to all healthcare workers.

Methods. Prospective surveillance of flood-related ID complications in IC cancer patients. During the 60 days post-Harvey, we monitored referrals to the ID service at MDA Cancer Center. We used the following definitions: Type of exposure: direct to flood water, direct to flooded structures, and others indirect (i.e., prophylaxis). Association risk: "Yes" (direct exposure), "No" (asymptomatic, no exposure, or infection noted prior) and "Probable" (lack of records to establish correlation). Types of infections were classified as soft tissue, gastrointestinal, respiratory, IV line associated or fever. Recommendations were noted including types of antibiotics, vaccinations, or imaging.

Results. A total of 36 cases were referred to our department. Fifty-six percent had exposure to flood-water with/without exposure to structures, 33% to structures only and 11% were other (Figure 1). Regarding the association of an ID problem to flood-exposure, we found an equal distribution of 39% with an association and 39% with a probable association, and the remaining 22% with no association (Figure 2). Of the infections, the majority of infections were respiratory (42%) or soft tissue (31%) (Figure 3). There was a trend of broader antimicrobial coverage for water associated bacteria and mold infections. Only six immunizations recommendations were attained.

Conclusion. To our knowledge this is the first and largest study of ID complications in IC cancer patients following a natural disaster in medical literature. Our active surveillance showed a lower number of disaster related ID complications than anticipated, possibly because of difficulty determining exposure and underreporting of infections despite active education. Due to individual immunosuppression and exposure, there was variety of recommendations (antimicrobials, studies, or vaccinations). In the event of a weather disaster, we are developing a standard triage survey regarding type of exposure and impact, and also a process for effective immunizations.

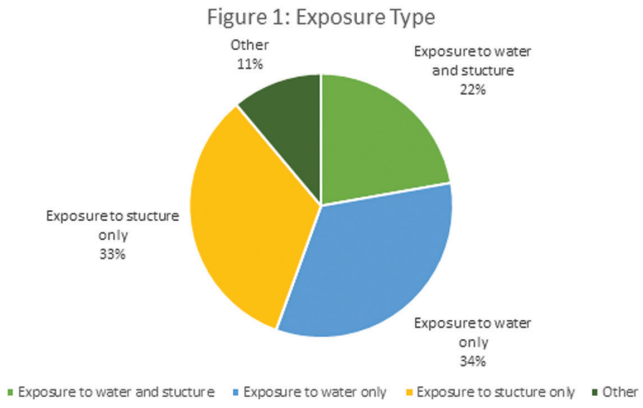


Figure 2.

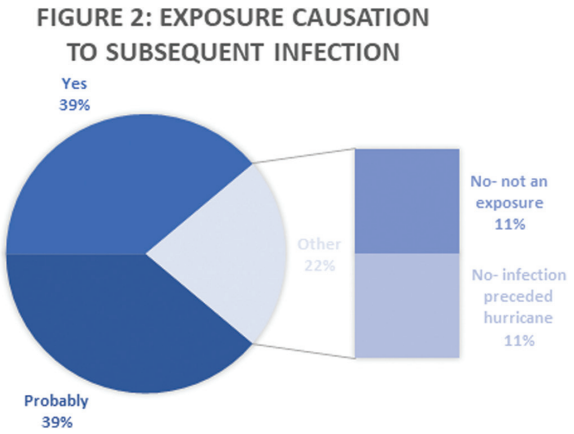
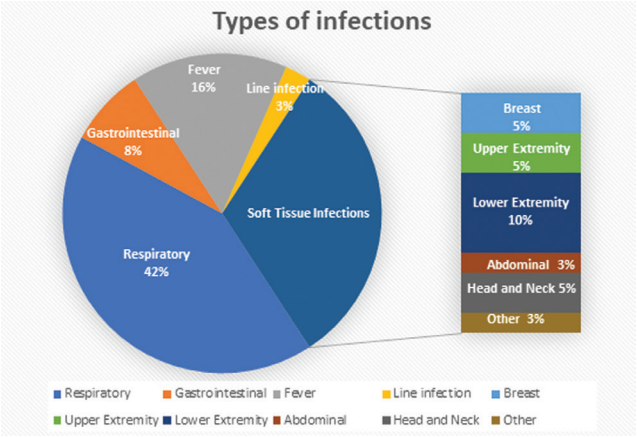


Figure 3



Disclosures. **J. Adachi**, Merck: Grant Investigator, Research grant

1571. Cost-Effectiveness Analysis of Duration of Valganciclovir Prophylaxis Among CMV Serology Mismatched (Donor+/Recipient−) Lung Transplant Recipients

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Background. Cytomegalovirus (CMV) is the most common cause of opportunistic infection (OI) following lung transplant (LTx), with incidence of 30–90%. CMV is associated with direct morbidity and indirect effects (e.g., graft failure, development of OIs and graft rejection (ACR), etc.), all of which lead to poor outcomes. Donor CMV positive, recipient negative (D+/R−) patients have the highest risk of CMV infections, for which they typically receive prolonged durations (≥1 year) of valganciclovir prophylaxis (Px). Px is limited by toxicity and ganciclovir-resistance. We performed a cost effectiveness analysis of differing lengths of Px in CMV D+/R− LTx patients.

Methods. We built a Markov state transition model using month-long cycles over a five-year time horizon, a 3% discount rate, and taking a healthcare system perspective. Model health states included episodes of CMV viremia and disease, ACR, and death. Identical hypothetical cohorts of D+/R− patients received 1–2 years of Px. Event probabilities were drawn from national data and local data from patients seen at our center. Cost data (Px and treatment, treatment of side effects, CMV-associated OI, viral load monitoring, etc.) were based on national estimates. Sensitivity analyses were performed on CMV infection incidence while on Px and time on Px.

Results. Receiving 1 and 2 years of Px had average total direct medical care costs of $115,182 and $141,290, respectively. The average life-years gained for receiving 2 years and 1 year of Px were 3.11 and 2.81, respectively, resulting in an incremental cost-effectiveness ratio (ICER) of $87,984 per life-year gained. A sensitivity analysis varying CMV infection incidence on Px showed that 1 year dominates 2 years of Px only when this incidence is >50% annually (i.e., 1 year of Px costs less and gains more life years). Real-world experience, however, shows that breakthrough CMV rate while on VGC Px is much <50% due to Px efficacy. If duration of Px is extended to 3 years, the ICER increases to $95,815/life-year (3.34 life-years gained) when compared with 1 year.