cal trial population were included in the estimation of total cost. HCRU costs were estimated using the unit wholesale acquisition cost for T-DM1 and LORB (13) to activity-based costing (5) to time-driven activity-based costing (2). Besides these, some costs were calculated using sophisticated methods, numerous “home-made” approaches were observed (23) and some studies didn’t state their method (7). CONCLUSIONS: Due to heterogeneity both in methodology, input factors and paucity in costing methodologies to compare the costs were provided by these various studies. This comprehensive literature review of radiotherapy cost studies highlights the need for such studies to be conducted according to consistent costing accounting approaches and with rigor in the reporting of cost inputs and methodology.

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OBJECTIVES: To critically analyse radiotherapy cost studies published over the last 35 years. METHODS: We conducted a comprehensive and systematic review of the literature searching for radiotherapy cost calculation studies on PubMed (Medline) and Embase databases and in the grey literature. The searches yielded 1327 unique entries that were evaluated against the following selection criteria: actual medical cost, external beam radiotherapy (EBRT), clear description of the cost calculation method. The review for compliance with the criteria was conducted in three phases: title; abstract and then full manuscript. RESULTS: Since 1981, 50 studies satisfied the criteria of selection. The analysis was conducted in 33 different countries. The costs were used to support different purposes and compared to different resources. CONCLUSIONS: The accuracy of the reported costs is questionable due to the absence of guidelines about how to conduct the cost analysis of radiotherapy. The different methods used to study the cost effectiveness of radiotherapy make comparison of the results difficult. Further research is needed to improve the quality of these studies and to stimulate the collection of more homogeneous data.

PCN88 COSTS TO U.S. HEALTH INSURERS FOR HEMATOPOIETIC STEM CELL TRANSPLANT (HSCT) PATIENTS WITH DS DNA VS STRANDED DNA (DSDNA) VIRUS INFECTIONS FOLLOWING TRANSPLANT
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OBJECTIVES: Patients undergoing HCT are at risk for infections, especially dsDNA viral infections (cytomegalovirus, BK Virus, Epstein-Barr Virus, HHV-6, herpes simplex, herpes zoster, and adenovirus), for which there are limited viable preventative pharmacotherapies. Our objective was to compare direct medical costs reimbursed by health insurers following HCT for patients with dsDNA viral infection versus those without infections. METHODS: MarketScan Research Databases were used to identify patients with a first (index) procedure code for HCT between 01-July-2009 and 30-June-2014. Eligible patients were required to have 365 days of health plan enrollment prior to HCT to understand baseline factors. Reimbursements were tabulated for up to 365 days post-transplant; univariate Wilcoxon tests compared reimbursements for patients with at least one dsDNA infection versus patients without a dsDNA infection. RESULTS: The cohort included 6,653 HCT patients with no dsDNA viral infection (2,111 [32%] allogeneic, 4,442 [68%] autologous) and 1,275 patients with at least one dsDNA viral infection (524 [72%] allogeneic, 351 [28%] autologous). Mean (SD, IQR) reimbursements for the 365 days post-transplant were $218,151 (SD=$209,717, IQR=$94,873-$276,992) for HCT recipients without dsDNA infections versus $470,784 (SD=$467,557, IQR=$193,854-$588,019; p<0.0001) for those with dsDNA infection. Among patients with breast cancer, costs were higher. Mean (SD, IQR) reimbursements for the 365 days post-transplant for allogeneic HCT recipients without infection were $320,320 (SD=$503,913; IQR=$261,318-$654,483; p<0.0001) for patients with dsDNA infection. Adenovirus infection represented 4.5% of all dsDNA viral infections. CONCLUSIONS: Patients who experience dsDNA viral infection following HCT will have higher costs of reimbursement compared to those without such infections. dsDNA virus infections are most common and more costly in allogeneic HCT recipients. Measures to prevent dsDNA viral infection following HCT could result in cost savings and improved patient outcomes.