239 EFFICACY AND TOXICITY OF SINGLE AGENT IMMUNE CHECKPOINT INHIBITORS AMONG ADULTS WITH CANCER AGED ≥80 YEARS: A MULTICENTER INTERNATIONAL COHORT STUDY

[1]Caroline Nebhan*, [2]Alessio Cortellini, [3]Weijie Ma, [4]Teja Ganta, [1]Haocan Song, [1]Fei Ye, [1]Rebecca Irlmeier, [4]Neha Debnath, [5]Anwaar Saeed, [5]Maluki Radford, [6]Asrar Alahmadi, [6]Akiva Diamond, [7]Christopher Hoimes, [6]Nikhil Ramaiya, [8]Carolyn Presley, [8]Dwight Owen, [9]Sarah Abou Alaiwi, [9]Amin Nassar, [9]Biagio Ricciuti, [10]Giuseppe Lamberti, [11]Melissa Bersanelli, [11]Chiara Casartelli, [11]Sebastiano Buti, [12]Paolo Marchetti, [12]Raffaele Giusti, [1]Marco Filetti, [13]Vito Vanella, [13]Domenico Mallardo, [14]Shravanti Macherla, [15]Tamara Sussman, [16]Andrea Botticelli, [17]Domenico Galetta, [17]Annamaria Catino, [17]Pamela Pizzutilo, [18]Carlo Genova, [19]Maria Giovanna Dal Bello, [20]Foteini Kalofonou, [20]Ella Daniels, [13]Paolo Ascierto, [20]David Pinato, [9]Toni Choueiri, [1]Douglas Johnson, [4]Thomas Marron, [3]Yinghong Wang, [21]Abdul Rafeh Naqash. *[1]Vanderbilt University Medical Center, Nashville, TN, USA; [2]University of L'Aquila, L'Aquila, Italy; [3]MD Anderson Cancer, Houston, TX, USA; [4]Icahn School of Medicine at Mount Sinai, New York, USA; [5]University of Kansas Cancer Center, Kansas City, KS, USA; [6]Case Western Reserve University, Cleveland, USA; [7]Duke Cancer Institute, Durham, OH, USA; [8]The Ohio State University Comprehensive, Columbus, OH, USA; [9]Dana-Farber Cancer Center, Boston, MA, USA; [10]University of Bologna, Bologna, Italy; [11]University of Parma, Parma, Italy; [12]Universitaria Sant'Andrea, Rome, Italy; [13]Istituto Nazionale Tumori IRCCS, Napoli, Italy; [14]East Carolina University Brody School of, Greenville, USA; [15]Cleveland Clinic Foundation, Cleveland, OH, USA; [16]Sapienza University of Rome, Rome, Italy; [17]IRCCS Istituto Tumori Giovanni Paolo II, Bari, Italy; [18]Università degli Studi di Genova, Genova, Italy; [19]IRCCS Ospedale Policlinico San Martino, Genova, Italy; [20]Imperial College London, London, UK; [21]National Cancer Institute, Silver Spring, MD, USA*

Background Immune checkpoint inhibitors (ICIs) are approved by the U.S. Food&Drug Administration in over 17 tumor types. Older adult patients make up about a quarter of all cancer patients but are historically understudied in cancer clinical trials. ICIs are associated with immune-related adverse events (irAEs), which may be particularly morbid for older adult patients with underlying comorbidities and impaired functional status. In this study, we provide insight into the real-world safety and efficacy of ICIs among older adult patients (≥80 years) with cancer.

Methods This is a multicenter, international retrospective study of tumor-agnostic older adult patients with cancer treated with single-agent ICIs between 2010–2019 from 18 academic centers in the U.S. and Europe. A cohort of 928 patients aged ≥80 years during treatment with ICI was assembled and analyzed to evaluate clinical outcomes and irAE patterns in older adult patients treated with single-agent ICIs.

Results Median age at ICI initiation was 83.0 years (range 75.8–97.0). Most patients (86.9%) were treated with anti-PD-1 therapy. Among the full cohort, the three most common tumors were non-small cell lung cancer (NSCLC, 37.2%, n=345), melanoma (35.5%,n=329), and genitourinary (GU) tumors (16.5%,n=153). Objective response rates for patients with NSCLC, melanoma, and GU tumors were 32.2%, 39.3%, and 26.2%, respectively. Median progression-free survival (PFS) was 6.7 months (95%CI, 5.2–8.6) for patients with NSCLC, 11.1 months (95%CI, 8.9–16.0) for patients with melanoma, and 6.0 months (95% CI, 5.0–10.7) for patients with GU malignancy. Median overall survival (OS) was 10.9 months (95%CI, 8.6–13.1) for patients with NSCLC, 30.0 months (95%CI, 23.6–46.4) for patients with melanoma, and 15.0 months (95%CI 9.1–25.4) for GU patients (Figure 1A-C). Within histology-specific cohorts (NSCLC, melanoma and GU), clinical outcomes were similar across age subgroups (<85,85–89,>90). Among all patients (N=928), 41.3% experienced ≥1 irAE(s), including 12.2% reported to be grade (G)3–4. No irAE-related deaths occurred. The median time to irAE onset was 9.8 weeks; 57% occurred within the first 3 months after ICI initiation. ICI was discontinued due to irAEs in 16.1% patients. There was no significant difference in the rate of irAEs among patients age <85, 85–89, and ≥90 years (p=0.15). Despite similar rates of G3+ irAEs, ICIs were discontinued due to irAE more than twice as often among patients ≥90 years compared to patients <90 years (30.9% vs. 15.1%, p=0.008) (table 1).

Conclusions ICIs are effective and generally well-tolerated among older patients with cancer. However, ICI discontinuation due to irAE is more frequent with increasing age.

http://dx.doi.org/10.1136/jitc-2021-SITC2021.239