12062 **Poster Session**

Frailty IO: Frailty parameters and incidence of immune related adverse events in older patients treated with immune checkpoint blockers (ICB).

Capucine Baldini, Bérengère Beauplet, Lauren Seknazi, Arnaud Pages, Marie Vanneste, Sandrine Estivin, Nicolas Saint Alme, Vincent Goldschmidt, Maxime Frelaut, Aymeric Kisserli, Sarah Guitteny, Celine Nagera Lazarovici, Rachid Mahmoudi, Coline Montegut, Julieta Rodriguez, Anne-Laure Couderc, Elena Paillaud, Florence Canoui-Poitrine; Drug Development Department (DITEP), Gustave Roussy, Villejuif, France; CHU Caen, Caen, France; Drug Development Department, Gustave Roussy Cancer Campus, Villejuif, France; Department of Biostatistics and Epidemiology, Gustave Roussy, Villejuif, France; CHU Rouen, Rouen, France; Unité de Coordination en Oncogériatrie de Bretagne, Brest, France; Gustave Roussy, Villejuif, France; CHU Reims, Reims, France; CH Carcassonne, Carcassonne, France; APHM, Marseille, France; Department of Geriatrics, AP-HP, Hôpital Européen Georges Pompidou, Paris, France; Université Paris Est Créteil, INSERM, IMRB, Créteil, France

Background: Immune checkpoint blockers (ICB) are one of the cornerstone of cancer treatment. The favorable tolerance profile makes it an interesting option in older patients with cancer. However, few evidence is available in patients aged 70 years and older according to geriatric parameters. We aimed to determine the impact of frailties on immune related adverse events (irAEs) in a real-life population of older patients treated with ICB. **Methods:** This retrospective French multicentric cohort study enrolled all patients aged 70 years or over who underwent a geriatric assessment before the start of ICB in monotherapy or in combination between January 1st 2016 and December 31st 2021. Main endpoint was to assess frailty and incidence of irAEs. **Results:** In total, 224 patients were included. Median age was 82 years old (Q1:77-Q3:87). Patients were mostly men (66%), 40% were treated for a skin cancer (melanoma or squamous), 35% lung and 15% genitourinary. Median number of comedications was 5 (3-8) and median G8 was 12 (9 – 14). Median ADL (/6) was 6 and IADL (/4) was 3 (2-4). Most patients were treated with ICB in monotherapy (80%). Altogether, 49% of patients experienced all-grade toxicity and 25% had more than 1 adverse event during the treatment course. The incidence of high-grade toxicity (≥ 3) was 14%. The most frequent types of toxicity were gastro-intestinal (17%), skin (13%), thyroid (9%) and rheumatoid (7%). Male gender ($p < 0.02$), normal IADL ($p < 0.01$), normal Timed up and go test ($p < 0.02$), not having falls in the last 6 months ($p < 0.001$) and visual impairment ($p = 0.02$) were significantly associated with toxicity in univariate analysis. Multiple toxicities were associated with male gender ($p = 0.03$), vision impairment ($p < 0.001$), normal IADL ($p < 0.05$), normal Timed up and go test ($p < 0.02$) not having falls in the last 6 months ($p < 0.001$). There were no association with 4-month hospitalization ($p = 0.73$). Median overall survival (OS) was 16.33 months [95%CI 12.78 - 20.63] and the 3-month OS rate 84.83% [95%CI 79.26 - 89.11]. Median progression free survival (PFS) was 6.08 [95%CI 5.13 - 8.71] in the overall population. Toxicity was associated with better PFS compared to no toxicity (logrank test : $p < 0.01$) with a median PFS (toxicity group) of 6.14 months [95%CI 5.13 - 8.94] versus median PFS (no toxicity group) of 5.26 months [95%CI 3.25 - 8.41]. Median PFS for patients with multiple toxicity was longer 9.86 months [95%CI 5.13 - 23.92] ($p < 0.01$). **Conclusions:** Older patients without IADL or walk impairments but with visions problem had increased incidence of irAEs. The PFS analysis shows a positive association of toxicity confirming that longer exposure to ICB might result in higher risk of irAE. The absence of IADL or mobility impairement may be associated with longer benefit from ICB. Further analysis will be presented at the meeting. Research Sponsor: BMS.

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