Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Conclusions: T-cell infiltration and PD-L1 expression are common in gliomas although in limited quantities. A perivascular distribution of T-cells is most commonly seen. Neither T-cell infiltration nor PD-L1 showed prognostic value in our series. These results agree with those priorly published and may explain the lack of efficacy of PD-1 inhibitors in this disease.

Legal entity responsible for the study: The authors.

Funding: Grupo Español de Investigación en Neuro-Oncolgia (GEINO).

Disclosure: S. Cabezas-Camareno; Financial Interests, Personal, Invited Speaker: Bristol Myers Squibb; Financial Interests, Personal, Invited Speaker: Merck KGA; Financial Interests, Personal and Institutional, Principal Investigator: AstraZeneca; Financial Interests, Personal and Institutional, Principal Investigator: GlaxoSmithKline. All other authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2021.10.049

34P Dynamic changes in plasma PD-L1 in patients with gliomas: Prognostic value and association with IDH status

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Background: Immuno-liquid biopsy in a growing research field since the advent of immunotherapy (IT). However, both plasma liquid biopsy and IT are still immature in gliomas. Our aim was to study T-cell infiltration and PD-L1 status in a large retrospective series of patients with grade II to IV gliomas.

Methods: This are the results of a prospective project to study immunological factors in patients with grade II to IV gliomas. Immunohistochemistry was performed to evaluate PD-L1 expression and CD4+ and CD8+ T cells in FFPE tumor samples. IHC results were correlated with IDH mutational status, MGMT methylation status and survival.

Results: From February 2017 until August 2021, 62 patients were enrolled (Glioblastoma (GB): n=37; Anaplastic Astro (AA): n=8; Anaplastic oligo (AO): n=3). Grade II: n=14 (astro: n=8; grade II oligo: n=6). IDH 1/2-mutant: 25/61 (40%); IDH 1/2-mutant: 25/61 (40%); IDH 1/2-mutant: 25/61 (40%); IDH 1/2-mutant: 25/61 (40%). IDH 1/2-mutant: 25/61 (40%). IDH 1/2-mutant: 25/61 (40%). IDH 1/2-mutant: 25/61 (40%); CD4+ vs CD8- GBs (p=0.455), nor in PD-L1+. GBs (p=0.303). There were no differences in OS in grades II/III IDH-MUT depending on CD4 (p=0.858), CD8+ (p=0.192) and PD-L1 status (p=0.366). There were no differences in OS in grades II/III IDH-WT depending on CD8 (p=0.617) and PD-L1 status (p=0.886).

Conclusions: Prognostic value and association with IDH status

Legal entity responsible for the study: The authors.

Funding: Grupo Español de Investigación en Neuro-Oncolgia (GEINO).

Disclosure: S. Cabezas-Camareno; Financial Interests, Personal, Invited Speaker: Bristol Myers Squibb; Financial Interests, Personal, Invited Speaker: Merck KGA; Financial Interests, Personal and Institutional, Principal Investigator: AstraZeneca; Financial Interests, Personal and Institutional, Principal Investigator: GlaxoSmithKline. All other authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2021.10.051

36P Alterations in tumour-promoting cytokines in cancer patients after SARS-CoV-2 infection

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Background: Cytokines, chemokines and growth factors (CGCs) are intricately involved in the progression of both solid and haematological malignancies while altering immune responses important for immunity. So far, the alterations in CGCs in

Legal entity responsible for the study: The authors.

Funding: Grupo Español de Investigación en Neuro-Oncolgia (GEINO).

Disclosure: S. Cabezas-Camareno; Financial Interests, Personal, Invited Speaker: Bristol Myers Squibb; Financial Interests, Personal, Invited Speaker: Merck KGA; Financial Interests, Personal and Institutional, Principal Investigator: AstraZeneca; Financial Interests, Personal and Institutional, Principal Investigator: GlaxoSmithKline. All other authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2021.10.050
cancer patients as a consequence of exposure to the SARS-CoV-2 virus is not sufficiently known.

Methods: Plasma levels of 55 CCGs were measured in ambulatory cancer patients, coming for routine blood collections. 52 patients exposed to SARS-CoV-2 were compared with 54 unexposed cancer patients. As controls, we studied 57 healthcare workers (HCWs) of whom 15 were exposed to SARS-CoV-2. SARS-CoV-2 exposure was determined by a positive PCR or serology and CCGs were measured with a multiplex electrochemiluminescent assay platform.

Results: Compared to unexposed HCWs, unexposed patients with solid and haematological malignancies also presented with statistically significant elevations in 35 CCGs of which 19 were common to both cancer groups. Amongst these TNF-α, IFN-γ, IL-17A, IL-22, IL-9 and IL-10 as well as Placental Growth factor and Erythropoietin were evaluated. Paraffin-embedded formalin-fixed tissue samples were available from 15 patients (3 unexposed cancer patients, 7 SARS-CoV-2 exposed solid or haematological malignancy patients). Four cancer groups were identified: healthy controls, unexposed cancer patients, SARS-CoV-2 exposed cancer patients (both on active treatment). Several cytokines elevated in the haematological malignancy group are known to promote tumour growth, thereby enhancing responses to immune checkpoint inhibition. The albumin-globulin ratio (AGR) could be a prognostic biomarker in patients with cancer, although the data is limited in patients treated with ICIs.

Conclusions: Several cytokines and chemokines as well as angiogenic and other growth factors. Cancer patients under active treatment are able to generate an appropriate CCG response after SARS-CoV-2 exposure, but levels could persist for at least 3 months after the initial exposure. Several cytokines elevated in the haematological malignancy group are known tumour promoting factors, thus requiring increased vigilance towards tumour progression in SARS-CoV-2 exposed/COVID-19 recovered cancer patients.

Legal entity responsible for the study: University of Antwerp - Molecular Pathology Group.

Funding: University of Antwerp, Kom Op Tegen Kanker, UZA Foundation, Horizon2020.

Disclosure: All authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2021.10.052

37P PO-L1 on the endothelium of micromangiu inside tumor: A novel predictor for the efficacy of anti-angiogenesis (anlotinib) plus anti-PD-L1 (TQ-B2450)?

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Background: To elucidate the predictive power of PD-L1 on microvascular endothelial cells for the efficacy of anti-angiogenesis (anlotinib) plus anti-PD-L1 antibody (TQ-B2450), and to screen the advantageous population of this combination treatment.

Methods: In a phase Ib clinical study, the efficacy of TQ-B2450 injection alone or combined with anlotinib in patients with advanced non-small cell lung cancer (NSCLC) was evaluated. Paraffin sections before treatment were collected for multicolor multi-target immunofluorescence staining, and the positive rate of PO-L1 expression on microvascular endothelial cells and tumor cells was calculated. The relationship between the expression of PO-L1 and clinicopathological characteristics was analyzed. Survival curves between groups of high and low PO-L1 expression were compared by Log-rank method.

Results: The expression of PO-L1 on tumor cells was positively correlated with that on vascular endothelial cells (P<0.001). The expression of PO-L1 on vascular endothelial cells was high in patients with high monocyte/lymphocyte ratio (MLR, P=0.020), platelet/lymphocyte ratio (PLR, P=0.006) and systemic immune-inflammation index (SII, P=0.014) in pre-therapeutic peripheral blood. In patients with high expression both on vascular endothelial cells and tumor cells who experienced TQ-B2450 alone, the mPFS was significantly shorter than that of patients receiving anlotinib plus TQ-B2450 (89 days vs 246 days, P=0.002). However, for patients with low/no PO-L1 protein expression on microvascular endothelial cells, there was no difference in short-term outcomes and PFS between two groups of TQ-B2450 alone or anlotinib plus TQ-B2450 (P=0.46).

Conclusions: Patients with high PO-L1 expression on microvascular endothelial cells are difficult to benefit from mono-immunotherapy, while anlotinib may increase the efficacy probably through downregulating PD-L1 on microvascular endothelial cells. PO-L1 protein on microvascular endothelial cells is expected to be a feasible marker for screening the optimal population of immune checkpoint inhibitors combined with anti-angiogenic therapy.

Legal entity responsible for the study: The authors.

Funding: Has not received any funding.

Disclosure: All authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2021.10.053

38P The association between albumin-globulin ratio (AGR) and survival in patients treated with immune checkpoint inhibitors

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Background: Immuno-therapy transformed oncology in the last decade, albeit the biomarker development was lagged behind. Recently, there is an interest in blood-based non-invasive biomarkers to predict prognosis in patients treated with immune checkpoint inhibitors (ICIs). The albumin-globulin ratio (AGR) could be a prognostic biomarker in patients with cancer, although the data is limited in patients treated with ICIs.

Methods: We aimed to evaluate the association between AGR and survival in ICi-treated patients. The data of 212 advanced-stage patients were retrospectively evaluated. The association between AGR with overall (OS) and progression-free survival (PFS) was evaluated with univariate and multivariate analyses. Additionally, receptor operating curve (ROC) analysis was conducted to assess the AGR’s predictive power in the very early progression (progression within two months) and long-term benefit (more than twelve months survival).

Results: The study cohort’s median age was 61 (IQR 51-67) years, and 68.4% of the patients were male. Melanoma was the most common diagnosis (23.1%), followed by RCC (22.2%) and NSCLC (17.5%). During a median follow-up of 9.56 (IQR 4.97-20.91) months, 154 patients died (72.6%), and 166 patients (78.3%) had any PFS event. The median OS was 9.76±1.13 months, and the median PFS was 4.34±0.53 months in all cohort. The median AGR was calculated as 1.21, and patients were classified into AGR-low and high subgroups according to the median. In the multivariate analyses, patients with lower AGR (<1.21) had decreased OS (HR: 1.530, 95% CI: 1.00-2.127, p=0.011) and PFS (HR: 1.390, 95% CI: 1.020-1.895, p=0.037). The area under curve of AGR to detect early progression and long-term benefit were 0.654 (95% CI: 0.562-0.747; p=0.001) and 0.671 (95% CI: 0.598-0.744; p<0.001), respectively.

Conclusions: We observed lower survivals with ICIs in patients with lower AGR levels. Additionally, the AGR values could detect the very early progression and long-term benefit with ICIs. If further research could confirm our results, AGR could be a prognostic and even a predictive biomarker.

Legal entity responsible for the study: The authors.

Funding: Has not received any funding.

Disclosure: All authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2021.10.054

39P Cancers with Ochrobactrum anthropi infection show enhanced responses to immune checkpoint blockade treatment

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Background: Accumulating clinical evidence has shown that different kinds of microbiota are involved in various cancers and their DNA levels are correlated with metastasis and prognosis. Ochrobactrum anthrophi is an emerging opportunistic pathogen in patients with immunocompromised function. The effect of O. anthrophi infection on the survival of patients with cancer is not clear.

Methods: We obtained genomic data from a multicohort study. We investigated genomic sequencing data of a multiple cohort comprised of 3150 pan-cancer patients from 20 hospitals in China. 751 patients received immunotherapy treatment (anti-PD1 therapy). The DNA level of O. anthrophi in each patient’s tissue was obtained from genomic sequencing data.

Results: In 3150 pan-cancer patients, the overall survival of patients with O. anthrophi infection was not significantly different from that of patients without O. anthrophi infection (HR = 0.843, P = 0.101). In 751 patients who received immune-checkpoint blockade treatment (anti-PD1 therapy), O. anthrophi infection was associated with better prognosis for those who received anti-PD1 therapy (HR = 0.577, P = 0.026).

Conclusions: Patients with malignant tumors who have O. anthrophi infection may benefit from immunotherapy treatment.