

survival outcome. And we found patients with PD-L1 expression and high PLR had the worst prognosis. The 5-year DFS rates were 68.4%, and 85.8% in high PLR+PD-L1 (+) group and low PLR+PD-L1 (-) group respectively ($p = 0.002$). The 5-year OS rates were 73.4% and 90.1%, respectively ($p < 0.001$).

Conclusions: High PLR are associated with poor DFS in breast cancer patients. PD-L1 expression combined with high PLR was associated with an aggressive clinical outcome. Further studies are needed to evaluate the predictive value of combination of PD-L1 and peripheral blood immune markers.

Legal entity responsible for the study: Shusen Wang

Funding: National Natural Science Foundation of China (81502302); Science and Technology Program of Guangdong Province (2014A020212384; 2016A020215079)

Disclosure: All authors have declared no conflicts of interest.

110P Prognostic and predictive value of lymphovascular invasion and lymph node status among breast cancer subtypes

G-S. Liao¹, H-M. Hsu¹, M-S. Dai², J-C. Yu¹

¹Division of General Surgery, Department of Surgery, Tri-Services General Hospital, National Defense Medical Center, Taipei, Taiwan, ²Division of Hematology/Oncology, Tri-Services General Hospital, National Defense Medical Center, Taipei, Taiwan

Background: Breast cancer subtype (BCS) and lymphovascular invasion (LVI) have both been independently demonstrated as prognostic factors. The objective of this investigation was to evaluate the prognostic power of LVI and lymph node status among BCSs.

Methods: From an institutional database, 2017 women with a histopathologically confirmed diagnosis of breast cancer treated between January 2006 and December 2014 were consecutively selected for participation in this study.

Results: Of the 2017 patients with breast cancer in the BCS groups, the highest OS and RFS rates were observed in luminal A subtype (93.6% vs. 95.1%, respectively) and the lowest were observed in TN subtype (85.3% vs. 83.0%, respectively). There were significant differences in OS according to the LVI status between the luminal A, luminal B and luminal HER2 subtypes. There were also a significant difference in the RFS rate of the luminal A, luminal B, luminal HER2 and HER2 subgroup. Therefore, we inferred that there were stronger links with LVI and BCS with regard to OS and RFS rates.

Kaplan-Meier analysis showed that there were significant differences in the OS and RFS rates according to the LVI status among the BCS groups. There were significant differences in OS according to the LVI status in the distribution of the luminal A, luminal B, luminal HER2, and TN subtypes. There were also significant differences in the RFS rates among the luminal B, luminal HER2, and HER2 subtypes. On multivariate analysis, after controlling for age, tumor size was independently associated with LVI and lymph node status among all BCS groups. There were significant differences in OS according to the status of lymph node-negative and LVI-positive in the luminal HER2 subtype, as well as lymph node-positive and LVI-positive in the TN subtype. There were also significant differences in RFS according to the status of lymph node-negative and LVI-positive in the luminal A subgroup.

Conclusions: LVI and lymph node status were important prognostic factor for OS and RFS among all BCSs. In lymph node-negative breast cancer, luminal HER2 had greater predictive value for OS, whereas luminal A displayed greater predictability for RFS. In lymph node-positive breast cancer, the TN subtype had greater predictive value for OS.

Legal entity responsible for the study: Tri-Services General Hospital, National Defense Medical Center

Funding: None

Disclosure: All authors have declared no conflicts of interest.

111P PD-L1 expression in TNBC: A predictive biomarker of response to neoadjuvant chemotherapy?

A. Botticelli¹, B. Cerbelli², A. Perna², C.E. Onesti¹, P. Sciattella³, L. Costarelli⁴, M. Monti², D. Campagna⁴, F. Mazzuca¹, L. Fortunato⁵, P. Marchetti¹, G. D'Amati²

¹Clinical and Molecular Medicine, Sapienza, University of Rome, Azienda Ospedaliera St. Andrea, Rome, Italy, ²Radiological, Oncological and Pathological Science, Sapienza University of Rome, Rome, Italy, ³Statistical Sciences, Sapienza University of Rome, Rome, Italy, ⁴Pathology, San Giovanni Addolorata Hospital, Rome, Italy, ⁵Surgery, San Giovanni Addolorata Hospital, Rome, Italy

Background: Immune system plays an important role in tumor surveillance and escape. Recently tumor infiltrating lymphocytes (TILs) have been proposed as a predictive biomarker for clinical outcome and pathological response (pR) after neoadjuvant (neoadj) chemotherapy (CT) in breast cancer. PD-L1 is expressed in about 20% of TNBC, suggesting the possibility of being a therapeutic target for this subtype of cancers. Here we studied the association between PD-L1 expression and pR in TNBC.

Methods: We enrolled 54 pts who had received neoadj CT (EC for 4 cycles followed by Paclitaxel q21 for 4 cycles) between Jan 2008 and Dec 2016 at Policlinico Umberto I and San Giovanni Hospital of Rome. We performed IHC for CD20, CD3, CD4, CD8, CD68, N-CAM and PD-L1 (Ventana SP142 clone) in basal paraffin-embedded biopsies. PD-L1 expression on tumor cells was evaluated both qualitatively (membrane staining intensity 0 to 3+) and quantitatively (% of positive cells.). The percentage of

TILs positive for PD-L1 was also recorded. Statistical analysis was performed with T di Student test and χ^2 test.

Results: We enrolled 54 pts (median age: 50 y; range 28-75) affected by TNBC: 51 ductal (94.4%), 2 metaplastic (3.7%), 1 lobular (1.9%). The clinical stage before neoadj CT was as follow: 12.9% cT1 (7 pts), 72.2% cT2 (39 pts), 3.7% cT3 (2 pts), 1.85% cT4 (1 pt) and 5.5% cTx (3 pts). 23 pts were cN+ (42.5%). After neoadj CT 30 pts underwent mastectomy (55%) and 24 conservative surgery (45%). 19 pts (35%) showed pCR. No significant associations were found between pR and cT, cN, age, histotype and KI-67. In 64.8% of basal biopsies (35 pts) PD-L1 was not detected on tumor cells and in 18.5% (10 pts) it was absent in the immune infiltrate. PD-L1 expression was detected in > 25% of tumor cells in 4 pts, all of which showed pCR ($p = 0.024$). No associations between intensity of membrane staining and pR were detected ($p = 0.7$). The immune infiltrate was characterized mostly by the presence of CD3+ CD8+. No statistically significant associations between and PD-L1 expression on immune infiltrate were detected.

Conclusions: Basal PD-L1 expression on cancer cells was associated with a better pR in TNBC undergoing neoadj CT. The introduction of anti PD-L1/PD-L1 therapy in this setting of pts could lead to interesting results.

Legal entity responsible for the study: Sapienza University of Rome

Funding: None

Disclosure: P. Marchetti: Advisory board and meeting with Pfizer, Roche, Novartis, MSD, Bristol-Myers Squibb, Ipsen, AstraZeneca, Boehringer Ingelheim. All other authors have declared no conflicts of interest.

112P Pathological evaluation of tumor infiltrating lymphocytes and the benefit of nivolumab in advanced non-small cell lung cancer (NSCLC)

L. Gataa¹, L. Mezquita¹, E. Auclin¹, S. Le Moulec², P. Alemany³, M. Kossai³, J. Massé⁴, C. CARAMELLA⁵, J. Remon Masip¹, J. Lahmar¹, R. Ferrara¹, A. Gazzah¹, J-C. Soria⁶, D. Planchard¹, B. Besse¹, J. Adam³

¹Medical Oncology Department, Gustave Roussy, Villejuif, France, ²Medical Oncology, Institute Bergonié, Bordeaux, France, ³Pathology Department, Gustave Roussy, Villejuif, France, ⁴Pathology, Bergonié, Bordeaux, France, ⁵Radiology, Gustave Roussy, Villejuif, France, ⁶Drug Development Department (DITEP), Gustave Roussy, Villejuif, France

Background: Assessment of tumor infiltrating lymphocytes (TIL) by pathologists using Hematoxylin-Eosin (H&E), has been described as a prognostic factor in resected NSCLC. We aimed to correlate TIL to the benefit from nivolumab in patients (pts) with treated advanced NSCLC.

Methods: Patients with advanced NSCLC treated with nivolumab, with biopsy available for evaluation, were included between November 2012 and February 2017 in two cancer centers. Patients characteristics and outcome were collected. The percentage of tumor infiltrating lymphocytes in the stroma was evaluated using H&E staining from archival pretreatment tumor tissue samples. Primary endpoint was to correlate TIL density with progression free survival (PFS).

Results: Out of ninety-eight patients included. 60 (61%) pts were male, with median age of 61 years and 85 (89%) were smokers. Sixty three (73%) pts were PS 0-1. Sixty tumors (61%) were adenocarcinoma, 29 (30%) squamous and 9 (10%) other histologies. Among 83 tumors with known molecular profile, 22 (27%) were KRAS mutated 7 (8%) EGFR mutated, 1(1%) ALK positive. The median treatment line was 3 (2-4). The median follow up was 8 months (m)(95%CI[6-19]). The median PFS was 2 m (95%CI[1-5]). The ORR was for 16%. The median TIL density was 5% (2-15). TIL density $\geq 5\%$ correlated with PFS in univariate and multivariate analysis (HR: 0.48 [0.28-0.82] $p = 0.007$ and HR:0.31 [0.14-0.68] $p = 0.004$ respectively). TIL density $\geq 5\%$ was also associated with better ORR (OR = 3.5, 95%CI [1.06-11.7], $p = 0.04$).

Conclusions: Pathological assessment of TIL allows an easy evaluation of immune infiltration in NSCLC and independently correlates PFS in NSCLC pts treated with nivolumab. Results from validation cohorts and combination with other morphological and immunohistochemical parameters will be reported.

Legal entity responsible for the study: Ithar Gataa

Funding: None

Disclosure: All authors have declared no conflicts of interest.

113P Could a systemic inflammation response index (SIRI) predict overall survival (OS) in metastatic pancreatic cancer (PC)?

V. Pacheco-Barcia, O. Donnay, R. Mondejar, J. Rogado, M.D. Fenor de la Maza, R. Colomer

Medical Oncology, Hospital Universitario de La Princesa, Madrid, Spain

Background: Cancer-associated inflammation is a key molecular feature of PC and may affect the clinical course. The aim of this study was to evaluate the prognostic relevance of SIRI based on peripheral neutrophil, monocyte, and lymphocyte counts in metastatic PC and its association with the metastatic site.

Methods: Retrospective analysis of the medical records of patients with pathologically confirmed metastatic PC between January 2011 and December 2016. Patients were classified as having liver metastases (LM) or extrahepatic metastases alone (EM). Associations with overall survival (OS) were analyzed using Cox proportional models.