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SIOG2022-0193**The Evolution of The Application 13-VALENTE PNEUMOCOCCAL CONJUGATE VACCINE in Brazilian cancer center Hospital-Based IN Vaccination Program for older cancer out/Inpatients: A pilot cohort Study**

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Introduction: The 13-VALENTE PNEUMOCOCCAL CONJUGATE VACCINE (13VCCV) was made available in the Brazilian public health system for the oncological population at the end of 2019 and made available at the Reference Centers for Special Immunobiologicals (CRIEs) outside cancer centers. With the covid 10 pandemic and little practice of patients/health professionals, the adherence rate was at critical levels.

Objectives: To determine the adhesion of the velhaVCCV to the application of 13VcCV in the cancer population, when offered directly at the cancer center, especially in the older cancer population.

Methods: From april–dezember of 2021, a prospective cohort with cancer patients. Prospective cohort study aligned with a pilot intervention study of application of the vaccine offered at the cancer center during the opportunity of the in /out patient's presence. The 13-valent pneumococcal conjugate vaccine was administered in this group. All participants were informed regarding the most common adverse effects of the possible vaccine reaction. The participants were contacted via telephone in order to be monitored for the appearance of those events.

Results and Conclusion: 1700 cancer patients were vaccinated, with mean age of 71.8 years. 1156 (68%) were older (age ≥60 years old). ten older cancer patients (0.86%) refused the vaccine against 22 (4.04%) patients age <60 years (p<0.001). 52% of patients returned and accepted the vaccine at a new time. High adherence to vaccination was demonstrated, especially among the older.

SIOG2022-0194**Factors Associated with Mortality in Older Cancer Patients with Sars from Covid-19: Explainable-AI Analysis**

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Introduction: Older cancer patients are more vulnerable to COVID-19. One of the challenges is to understand features that can better assist medical decisions.

Objectives: To identify factors associated with death in older cancer patients with Severe Acute Respiratory Syndrome (SARS) from COVID-19.

Methods: The prediction was tested in patients notified between Jan 2021 and Jun 2021, in Pernambuco, Brazil. Gradient Boosting and K-fold cross-validation were utilized. The pipeline consists of balancing, standardization and model fitting.

Results and Conclusion: The importance of the features was analyzed using their SHAP values, as shown in Figure 1. The features are sorted from the most important one to the less important. Vaccination was the factor most influential in the model and the only protective feature, while age and male sex were risk factors associated with death. The model showed predictive capacity in the test set (accuracy 0.61, AUC 0.65, precision 0.83, recall 0.60, and F1 0.69). Global mortality was 74% and other fatalities rates were shown in Table 1. In conclusion vaccination was the feature most influential in the model.
Table 1: Status of vaccination.

	Vaccinated 119 Total	Deaths	Unvaccinated 357 Total	Deaths
Sex				
Female	56	34	240	177
Male	63	43	245	195
Comorbidities				
Cardiovascular Disease	79	52	343	274
Diabetes Mellitus	43	27	173	131
Neurological disease	16	11	51	47
Brain Stroke	5	5	24	23
Lung Disease	13	11	38	28
Systemic Arterial Hypertension	28	18	121	93
Obesity	5	2	26	22
Kidney Disease	10	6	37	30
Smoking	9	7	50	38