






Acute coronary syndrome and cancer

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Cardiovascular disease is the most common cause of late morbidity and mortality among cancer survivors. The incidence of cancer and acute coronary syndrome in the same patient requiring percutaneous coronary intervention (PCI) is increasing significantly. The reported prevalence of cancer among patients with acute coronary syndrome ranges between 3% and 17%¹. In our institution in the past ten months, the prevalence of cancer among patients with acute coronary syndrome (ACS) who underwent PCI was about 10% (3% in active cancer treatment). It was found that lung, prostate, stomach, pancreas, and breast cancer are the most common types associated with ACS, which corresponds to our observations. A proinflammatory and hypercoagulable state with increased platelet activation and aggregation commonly occurs in cancer, increasing the prevalence of ACS. New cancer treatments have significantly improved cancer survival, on the other hand, this has at the same time led to an increase in the incidence of cardiovascular disease. Direct endothelial injury can be induced by radiotherapy. In the general population, a non-ST elevation myocardial infarction (NSTEMI) is the most common clinical presentation of ACS in cancer patients. Myocardial infarction with non-obstructive coronary arteries and Takotsubo syndrome can also occur in cancer patients, more often in women. Treatment of ACS in cancer patients should be based on an assessment of the risk of thrombosis and bleeding. Treatment should be tailored to each patient, not only according to the ACS subtype (unstable angina, NSTEMI and ST elevation myocardial infarction), but also considering the stage and type of cancer, anemia and thrombocytopenia, risk of bleeding, hemodynamic stability, life expectancy, previous or current cancer therapy, future treatment plans, planned operations and prognoses. Despite the recognized clinically relevant impact of cancer, cancer is not included in ischemia and bleeding scores such as The Global Registry of Acute Coronary Events (GRACE) and Can Rapid stratification of Unstable angina patients Suppress Adverse outcomes with early implementation of the ACC/AHA guidelines (CRUSADE). Patients with concomitant cancer and coronary artery disease are underrepresented in most ACS trials. One of the most relevant issues strongly limiting the invasive strategy in cancer patients is the prospect of dual antiplatelet therapy required after PCI. The presence of cancer should not limit the effective and safe treatment of ACS but requires a strict assessment of the risk of bleeding and thrombosis, in both cases with pharmacological and interventional treatment.

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LITERATURE

1. Lucà F, Parrini I, Abrignani MG, Rao CM, Piccioni L, Di Fusco SA, et al. Management of Acute Coronary Syndrome in Cancer Patients: It's High Time We Dealt with It. *J Clin Med.* 2022 Mar 24;11(7):1792. <https://doi.org/10.3390/jcm11071792>