

#### 144. Cardiovascular Disease Prevalence and Risk Factors in Survivors of Cancer: Korean Cohort Study

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### Body

**Background:** Although the development of cardiovascular diseases is not uncommon in cancer survivors, the epidemiology and related factors remain elusive. Hence, we aimed to assess the nationwide prevalence of cardiovascular disease (CVD) and risk factors of CVD in Korean cancer survivors.

**Methods:** We analyzed the prevalence and risk factors of new-onset CVD in 22,729 adult patients with common solid cancers who survived for 5 years or more following the first diagnosis of a cancer using data from the Korean National Health Insurance Service-National Cohort from 2006 to 2015.

**Results:** A total of 9464 patients (mean age; 61± 11 years) were included in the final analysis after excluding patients with no available medical records for risk factors of CVD (n=13,265). 25.3% (n = 2409) of patients had pre-existing CVD when they were first diagnosed with cancer. 7.6% (n =536) and 5.7% (n=407) of patients were newly diagnosed with CVD within 5 years and after 5 years from diagnosis of cancer, respectively during the follow up period (median; 87 months). Compared to patients who did not developed CVD, patients with newly developed CVD were significantly older and had a higher prevalence of hypertension and diabetes. In patients with newly developed CVD within 5 years, age, body mass index and hypertension were significantly associated with occurrence of CVD. In patients with newly diagnosed with CVD after 5 years, age, smoking, hypertension, and diabetes were risk factor associated with CVD in multivariate analysis.

**Conclusion:** After cancer diagnosis, 13% of cancer survivors newly developed CVD. The risk factors associated with CVD within and after 5 years of cancer diagnosis were different. Thus, we suggest that it is necessary to take a different approach to correcting risk factors of CVD according to time of cancer diagnosis in cancer survivors.

Table. Associated risk factors of newly developed CVD in surviving cancer patients according to timing of cancer diagnosis

	New onset CVD within 5 years				New onset CVD after 5 years			
	Univariate		Multivariate		Univariate		Multivariate	
	HR (95% CI)	p	HR (95% CI)	p	HR (95% CI)	p	HR (95% CI)	p
Age	1.062	<0.001	1.057	<0.001	1.077	<0.001	1.073	<0.001
BMI	1.048	<0.001	1.050	<0.001	0.995	0.740		
Smoking	1.021	0.84			1.593	<0.001	1.864	<0.001
Hypertension	2.533	<0.001	1.538	<0.001	2.192	<0.001	1.261	0.029
Diabetes	1.680	<0.001	1.068	0.51	2.286	<0.001	1.546	<0.001
Dyslipidemia	1.456	<0.001	1.148	0.14	1.381	0.002		
CKD	1.614	0.41			1.429	0.615		

**Clinical Implications:** Considering the prevalence of cardiovascular disease in cancer survivors, management of risk factors of cardiovascular disease is required to improve clinical outcomes, in particular, a different approach is needed depending on the time of cancer diagnosis.