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119 CANCER MORBIDITY OF PROFESSIONAL EMERGENCY RESPONDERS IN KOREA

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Objectives Many professional emergency responders in Korea have cross-trained and served in multiple roles depending upon the nature of the emergency incident. Therefore firefighters and other emergency responders in Korea have been exposed to the similar hazards during their job duration. This study aims to estimate the cancer morbidity of emergency responders and to compare it with that of the general population in Korea.

Methods The cohort was composed of 33 416 male emergency responders who were working at anytime between 1 January 1980 and 31 December 2007. Work histories were merged with the national cancer registry for follow-up the cancer morbidity of the cohort from 1996 to 2007. Standard Incidence Ratio (SIR) with reference to Korean men was analysed by PAMCOMP software.

Results Standard Incidence Ratios (SIR) with reference to national cancer rates were insignificantly decreased for all cancer (SIR=0.97, 95% CI=0.90 to 1.08). However colon and rectum (1.35, 1.07 to 1.67), kidney (1.59, 1.00 to 2.41), bladder (1.77, 1.08 to 2.73), and non-Hodgkin's lymphoma (1.81, 1.12 to 2.76) were significantly increased among all emergency responders. Just lymphohaematopoietic cancer (1.56, 0.91 to 2.50) was moderately significantly increased in firefighters. Among men with emergency medical service and technical rescue, small intestine cancer (4.61, 1.24 to 11.80) and non-Hodgkin's lymphoma (2.42, 1.25 to 4.23) were significantly increased.

Conclusions This excess in urologic, lymphohaematopoietic and colon cancer showed the similar trends conducted by foreign countries. Further follow-up of this cohort and alternate study designs will be needed to elucidate the relationship of exposure and health risks of emergency responders, especially firefighters.