Abstract Body: The risk of hepatocellular carcinoma (HCC) post HCV cure is not well-established for the North American population. We assessed the effect of sustained virologic response (SVR) on the risk of HCC among a large population-based cohort in Canada.

The BC Hepatitis Testers Cohort includes ~1.5 million individuals tested for HCV between 1990–2013, linked with data on medical visits, hospitalizations, cancers, prescription drugs, and mortality. Patients who received interferon-based treatments were followed from the end of last treatment to HCC occurrence, death or December 31, 2012. We examined HCC risk among those who did and did not achieve SVR using cumulative incidence function and multivariable Cox proportional hazard models.

Of 8147 eligible individuals who initiated treatment, 4663 (57%) achieved SVR and 3484 (43%) did not. Each group was followed for a median of 5.6 yr [range: 0.5-12.9]. The annual HCC incidence rate (IR) was 1.1/1000 person-yr (PY) in the SVR and 7.2/1000 PY in the no-SVR groups. The IR was higher among those with cirrhosis at treatment (SVR: 6.4, no-SVR: 21.0/1000 PY). The cumulative HCC incidence post treatment increase was steeper in the no-SVR vs. the SVR group (Fig 1). In the multivariable model, SVR was associated with reduced HCC risk (hazard ratio (HR)=0.20, 95%CI:0.13-0.30), while cirrhosis (HR=2.61, 95%CI:1.68-4.04), older age (50-59yr: HR=4.15, 95%CI:2.76-6.23; 60+yr: HR=6.37, 95%CI:3.9-10.41 vs. ≤49yr), being male (HR=1.98, 95%CI:1.33-2.96), genotype 3 vs. 1 (HR=1.85, 95%CI:1.25-2.73), and alcohol consumption (HR=1.46, 95%CI:1.0-2.15) were associated with higher HCC risk. In those with SVR, cirrhosis (HR=3.16), older age (50-59yr: HR=4.73; 60+yr: HR=5.44 vs. ≤49yr), and being male (HR=3.3) were associated with higher HCC risk.

SVR substantially reduces but does not eliminate the risk of HCC, which is higher among those with cirrhosis and older age at treatment initiation.