

## The Incidence of Extrahepatic Malignancies in Nonalcoholic Fatty Liver Disease (NAFLD)

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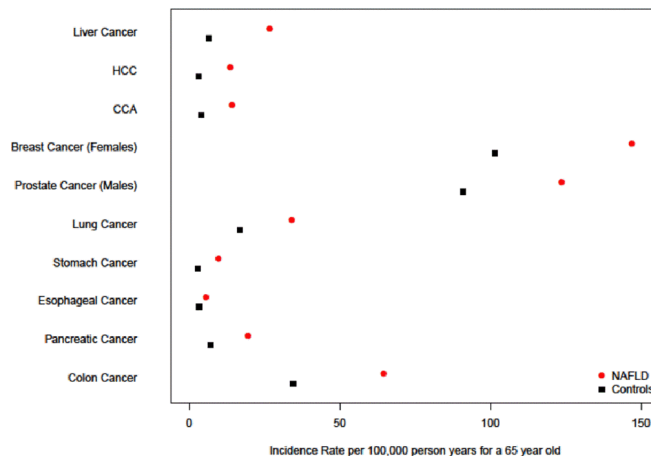
### Abstract Text

**Background:** Malignancy is the second most common cause of death in patients with NAFLD. Whether the increased malignancy risk is similar across all types of cancers is unknown. We aimed to determine the incidence of cancer (Ca) diagnosis in NAFLD compared to controls in a U.S. community.

**Methods:** A community cohort of all adults diagnosed with NAFLD and age- and sex-matched controls in Olmsted County, Minnesota, between 1997 and 2014 was constructed using the Rochester Epidemiology Project database. Age and sex-adjusted incidence ratios of common types of cancers per 100,000 person years (py) in NAFLD versus controls was calculated.

**Results:** We identified 3,869 NAFLD subjects (median age, 53; 52% women) and 15,209 controls who were followed until 2016, death or last medical record. Median follow-up was 7(1-20) years. Overall, 580 (15%) of NAFLD subjects and 1,521 (10%) of controls were diagnosed with malignancies during the study timeframe. The incidence rates at an arbitrary age of 65 are shown in the Figure. Whereas the incidence of malignancy was higher across all types of cancer in NAFLD versus controls, the incidence increase associated with NAFLD was the largest in the following types of cancer: 4-fold in liver Ca (26.8 vs 6.6 /100,000 py), 3.5-fold in stomach Ca (9.8 vs 2.8/100,000 py), 2.7-fold in pancreas Ca (19.6 vs 7.2 /100,000 py) and 2-fold in lung Ca (34.1 vs 16.9 /100,000 py). Overall, breast, prostate and colon Ca were the three most common cancers among NAFLD patients (147, 124 and 65/100,000 py, respectively).

**Conclusion:** In this population-based study, the incidence of malignancy among NAFLD patients was higher than among controls across all types of cancers, with the largest difference noted in liver cancer, followed by stomach, pancreas and lung. These data warrant further study of the association of NAFLD with these non-liver related malignancies.



### Disclosures

The following people have nothing to disclose: Kristin Mara, Kristin Mara, Joseph J Larson, Terry M. Therneau, Alina M Allen

Disclosure information not available at the time of publication: Stephen B Hicks