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### 2313 | AUTOMATED DEEP LEARNING DIAGNOSIS OF HEPATIC STEATOSIS ON CT SCANS REVEALS UNDERREPORTING BY RADIOLOGISTS

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**Background:** Non-alcoholic fatty liver disease (NAFLD) is a major cause of liver disease that is growing in prevalence. Despite its potential morbidity, many patients with NAFLD remain undiagnosed. Liver steatosis can be detected with reasonable accuracy on abdominal CT. We hypothesized that steatosis on CT scans is underreported by radiologists when not specifically sought, and aimed to test this hypothesis using a validated automated image analysis tool. **Methods:** Retrospective single-center pilot analysis of 997 de-identified abdominal CT scans, randomly selected from 73,692 scans performed between 2010-20 on adult subjects. Scans without a noncontrast series were excluded. Images were analyzed using automated deep learning liver segmentation and attenuation assessment algorithm (Graffy PM, Radiology, 2019) to obtain a mean volumetric liver attenuation value. Steatosis was defined as mean hepatic attenuation <43 HU. The

automated analysis was compared to textual radiology reports. Agreement between the automated analysis and the radiology report was quantified with a kappa test. **Results:** 212 CT scans with a noncontrast series from unique subjects were eligible for inclusion. The mean liver attenuation was  $54.2 \pm 19.4$  HU. The automated algorithm identified steatosis (<43 HU) in 39 (18.3%) exams, but radiologists reported steatosis in only 9 (23.1%) of those. Scans with unreported steatosis had higher attenuation overall ( $38.3 \pm 4$  vs.  $26.3 \pm 12.6$  HU,  $p < 0.001$ , Figure 1A). However, even at cutoffs as low as 34 HU, accurate reporting was only present in 50% of scans (Figure 1B). Reporting accuracy was not affected by year of scan and did not differ between a liver or non-liver indication for the scan. In 2 of 173 (1.2%) scans with liver attenuation >43 HU, radiology reports described steatosis (liver attenuations of 54.2 and 66.9 HU); overall agreement between report- and attenuation-based steatosis was present in 180 (84.9%) exams (Kappa = 0.30, 95% CI 0.14-0.47). **Conclusion:** In a cross-sectional pilot analysis of patients who completed abdominal CT scans for multiple indications, we found underreporting of liver steatosis, with radiologists identifying it in their report in fewer than 25% of scans. Incorporating routine measurement of hepatic attenuation on CT scans manually or by artificial intelligence tools may improve accuracy of reporting.

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### 2314 | A PHASE I, SINGLE-DOSE STUDY TO EVALUATE THE SAFETY, TOLERABILITY, AND PHARMACOKINETICS OF ASC43F, A FIXED-DOSE COMBINATION ORAL TABLET OF ASC41, A THYROID HORMONE RECEPTOR BETA AGONIST AND ASC42, A FARNESOID X RECEPTOR AGONIST IN HEALTHY SUBJECTS

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**Background:** Nonalcoholic steatohepatitis (NASH) is the more severe form of nonalcoholic fatty liver disease (NAFLD), a condition in which fat builds up in the liver. The complexities of NASH biology coupled with the numerous failures of monotherapy suggest that one therapeutic target may be insufficient to improve the histologic findings in NASH. Both thyroid hormone receptor  $\beta$  (THR- $\beta$ ) and farnesoid X receptor (FXR) agonists have shown some success in improving different and complementary aspects of NASH histology.

