1012 (43.3%) were classified as obese. In terms of specific conditions, 701 (29%) had diabetes mellitus and 796 (34.1%) met the diagnostic criteria for hepatic steatosis. Among the patients with hepatic steatosis, 245 (30.8%) also had diabetes mellitus. In terms of weight status, from the patients that were classified as overweight, 221 (23.7%) had hepatic steatosis, and from the patients that were classified as obese, 464 (45.8%) had hepatic steatosis. In terms of liver fibrosis scores, according to the APRI score, 151 patients met the criteria for fibrosis and 76 (50%) were classified as having significant fibrosis. Out of these 76 patients with significant fibrosis, 59 also had hepatic steatosis. The remaining 76 patients were diagnosed with advanced fibrosis and cirrhosis, of which 27 had coexisting steatosis. Using the FIB-4 index, 627 patients were identified as having fibrosis. Among them, 520 patients had fibrosis grades 2-3. Out of these 520 patients, 159 had concurrent hepatic steatosis. Additionally, 107 patients were classified as having advanced fibrosis, and 28 of them had steatosis. Furthermore, 164 patients had an FIB-4 index indicating advanced fibrosis and 40 had coexisting steatosis. According to the NAFLD fibrosis score, 225 patients were found to have advanced fibrosis, and 67 had hepatic steatosis. **Conclusion:** this study aimed to determine the prevalence and incidence of hepatic steatosis in asymptomatic patients. The findings revealed a significant burden of hepatic steatosis among the study population. Prioritizing the importance of early detection and intervention for hepatic steatosis, particularly in patients with associated risk factors such as diabetes, overweight, and obesity.

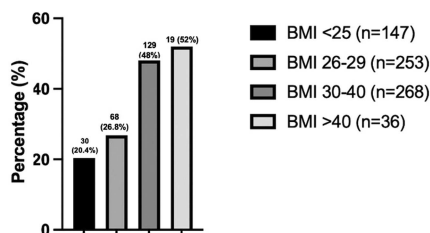**Prevalence of hepatic steatosis in patients with Diabetes Mellitus**

Figure A

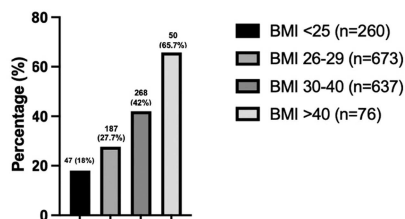**Prevalence of hepatic steatosis in patients without Diabetes Mellitus**

Figure B

2242-A | PREVALENCE OF NAFLD AND ACCURACY OF NITS IN PATIENTS WITH POLYCYSTIC OVARY SYNDROME

Wouter Robaeys[1,2], Leen Heyens[1,2,3], Nathalie Dhont[2], Geert Verswijvel[2], Ger H. Koek[3,4], Geert Robaeys[1], Struyve Mathieu[2], Penders Joris[1,2] and Sven Francque[5,6,7], (1)Hasselt University, (2) Ziekenhuis Oost Limburg, (3)Maastricht University, (4) Maastricht University Medical Center, (5)University of Antwerp, Edegem, Belgium, (6)Translational Sciences in Inflammation and Immunology, Laboratory of Experimental Medicine and Paediatrics, Faculty of Medicine and Health Sciences, University of Antwerp, Antwerp, Belgium, (7)Department of Gastroenterology and Hepatology, Antwerp University Hospital, Antwerp, Belgium

Background: Patients with Polycystic Ovary Syndrome (PCOS) might be at increased risk for NAFLD. Only one study (PMID: 22837189) assessed the presence of NAFLD in adult PCOS using the gold standard for non-invasive detection of liver steatosis being MRI-PDFF. The results of previous studies regarding the prevalence of steatosis in PCOS measured by other tests (*e.g.,* controlled attenuation parameter CAP™, blood derived scores) were discordant, did not include the gold standard and studied multiple different patient groups.

The aim of the current prospective study is to investigate the prevalence of NAFLD in PCOS based on MRI and to assess the accuracy of CAP™ and non-invasive blood-derived tests in a well-defined patient population with and without PCOS. **Methods:** In this ongoing, prospective, monocentric, Belgian study NAFLD is detected in patients with PCOS diagnosed according to the Rotterdam consensus (2003) compared to apparently healthy women by means of hepatic MRI, CAP™ and blood based non-invasive tests (*a.o.,* Hepatic Steatosis Index (HSI)).

Using CAP™ NAFLD has been defined as CAP™ > 215 dB/m while moderate to severe NAFLD has been defined as CAP™ > 275 dB/m.

By means of hepatic MRI PDFF NAFLD has classically been defined as a value > 5% but recently a threshold of 3.71% was proposed. **Results:** The demographics of the 42 PCOS patients and 29 healthy controls were: age 32 ± 5 vs. 35 ± 7 years (p = 0.046), BMI 26.9 [25.6-29.2] vs. 23.7

[23.5-27.0] kg/m^2 (p > 0.05), waist circumference 82 ± 80 cm vs. 77.4 ± 10.3 cm (p > 0.05), number of menstrual cycles 4.5 [4.3-6.6]] vs. 12.0 [10.3-12.1] (p < 0.001). Based on MRI NAFLD was detected using a threshold of 3.71% and of 5% in resp. 7 (21%) and 4 (10%) women with PCOS vs. 0 (p = 0.02) and 0 (p = 0.09) in controls.

Using CAP™ (cut-offs 215 dB/m and 275 dB/m) resp. 28 (67%) and 8 (19%) of the PCOS patients vs. 14 (48%) and 6 (21%) in controls were diagnosed with NAFLD (p = 0.12 and p = 0.86). HSI was increased in 16 (38%) patients with PCOS vs. 5 (17%) in controls (p = 0.06).

Diagnostic accuracy for NAFLD (MRI PDFF > 3.71%) was also high (AUC: resp. 0.89 and 0.93) (Figure 1). **Conclusion:** The MRI threshold significantly impacts on the observed prevalence of NAFLD in PCOS, with 5% substantially underestimating the prevalence, when studying this risk group. CAP™ and HSI have high accuracy to detect NAFLD as defined by MRI PDFF > 3.71%.

NAFLD is more prevalent in PCOS compared to controls. Further studies using a fully matched cohort and evaluating the reason for false positivity regarding CAP and HSI are in progress.

Figure 1: The accuracy of CAP™ and HSI compared to MRI-PDFF with a threshold of 3.71%
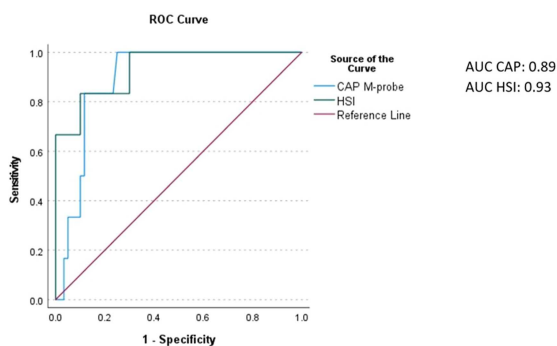
Disclosures: Sven Francque – Inventiva: Consultant, No, No; Eisai: Consultant, No, Yes; Siemens Healthcare: Speaking and Teaching, No, Yes; Novo Nordisk: Speaking and Teaching, No, Yes;

The following people have nothing to disclose: Wouter Robaeys, Leen Heyens, Ger H. Koek, Geert Robaeys Disclosure information not available at the time of publication: Nathalie Dhont, Geert Verswijvel, Struyve Mathieu, Penders Joris

2243-A | PREVALENCE OF NONALCOHOLIC FATTY LIVER DISEASE AND FIBROSIS IN PATIENTS WITH PREDIABETES/ DIABETES BASED ON BODY MASS INDEX

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Background: NAFLD is now the most common liver disease and may soon become the leading indication for liver transplantation **Methods:** We used data from the 2017-2018 NHANES. Excluding individual's with significant alcohol use and viral hepatitis, 4192 adult individual's had transient elastography. 893 individual's had diabetes and 1770 patients had prediabetes. We then categorized into three subgroups based on their BMI of normal (18.5-24.9 kg/m^2), overweight (25-29.9 kg/m^2), obesity (≥ 30 kg/m^2). Diabetes was defined as having hemoglobin A1c (A1c) ≥ 6.5%, fasting blood glucose ≥ 126 mg/dL, and/or treatment with oral hypoglycemic agent or insulin. Prediabetes was defined as fasting glucose of 100-125 mg/dL and A1c 5.7-6.4. CAP scores of ≥ 263 dB/m were defined as NAFLD. A transient elastography ≥ 8 kPa (≥ F2) and ≥ 13.1 kPa (≥ F4) were defined as suspected fibrosis and cirrhosis **Results:** Population mean age was 49 years, 48% of the individual's were men. NAFLD prevalence was 81.2% (95% CI: 77.6-84.8) in patients with diabetes, and 55.9% (95% CI:52.9-59) in patients with prediabetes. Among patients with diabetes, prevalence of NAFLD was substantially higher in obesity (90.8%, 95% CI: 86.9-94.6), followed by overweight (73.1%, 95% CI: 64.7-81.5), and normal BMI (43.5%, 95% CI: 25.6-61.4). Among obese individual's, increasing obesity class was associated with increased NAFLD prevalence (P < 0.001). Prevalence of fibrosis (≥ F2) was highest among individual's with obesity (34.2%, 95% CI: 27.9-40.5). Likewise, prevalence of cirrhosis was highest (12.1%, 95% CI: 5.7-18.5) among individual's with diabetes. Among patients with pre-diabetes, prevalence of NAFLD was substantially higher in obesity (78.6%, 95% CI: 72.9-84.4), followed by overweight (49.7%, 95% CI: 43.7-55.7), and normal BMI (16.9%, 95% CI: 11.8-22.1). Among obese individual's, increasing obesity class was associated with increased prevalence of NAFLD (P < 0.001). Prevalence of fibrosis (≥ F2) was highest among individual's with obesity (17.9%, 95% CI: 12.8-22.9). Likewise, prevalence of cirrhosis was highest (7.3%, 95% CI: 4.7-9.9) among individual's with diabetes. Among obese individual's, increasing obesity class was linearly associated with increased prevalence of fibrosis and cirrhosis in those with diabetes and prediabetes (P < 0.001) **Conclusion:** Our findings highlight that patients with DM and obesity are more likely to have NAFLD and advanced fibrosis and should purse definitive diagnostic studies to receive the recommended interventions and follow up