(POLARIS-2 and POLARIS-3) patients with and without compensated cirrhosis. DAA-experienced patients received treatment for 12 weeks, and DAA-naive patients received treatment for 8 weeks. Overall SVR12 rates were >95% across all the studies. This post-hoc analysis assesses efficacy in patients with and without traditional negative predictors of response.

Methods This was a retrospective analysis of data from 1056 patients treated with SOF/VEL/VOX in the Phase 3 studies. Presence of cirrhosis was determined by histology, Fibrotest/APRI, or Fibroscan. Viral load and other clinical and laboratory assessments were determined prior to treatment with SOF/VEL/VOX. Prior treatment records were source verified, and race was self-reported by the patient to the investigator.

Results Overall, 38% of patients had cirrhosis, 70% had HCV RNA ≥800,000 IU/mL, 59% of the DAA-experienced patients had received an NS5A inhibitor-containing regimen, 20% of the DAA-naive patients had prior treatment failure with pegylated interferon +ribavirin, 12% were ≥65 years old and 10% were black.

Conclusions The POLARIS-1, POLARIS-2, POLARIS-3, and POLARIS-4 studies enrolled a diverse patient population that included a significant number of patients with historically negative predictors of response including cirrhosis and prior exposure to DAA-containing regimens. High SVR12 rates for the ribavirin-free regimen of SOF/VEL/VOX were achieved across subgroups.

Abstract IDDF2018-ABS-0114 Table 1 provides SVR12 rates for each patient subgroup

	DAA-experienced SOF/NEL/NOX 12 Weeks	DAA-naïve SOF/NEL/NOX 8 Weeks
Overall	430/445 (97)	582/611 (95)
Cirrhosis	194/205 (95)	188/200 (94)
HCV RNA≥800 K	317/326 (97)	392/416 (94)
Prior PEG+RBV	-	114/124 (92)
Age>65	73/74 (99)	55/57 (96)
Black	50/54 (93)	43/48 (90)

IDDF2018-ABS-0120 THE EFFECT OF OMEGA-3 FATTY ACID SUPPLEMENTATION ON PAEDIATRIC NON-ALCOHOLIC FATTY LIVER DISEASE: A META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

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Background Paediatric non-alcoholic fatty liver disease (NAFLD) is an obesity-related disease with growing prevalence worldwide. While current guidelines recommend lifestyle modification, omega-3 supplementation has been suggested as an emerging therapeutic option. Despite supporting evidence demonstrated among adult NAFLD patients, similar meta-analysis among the paediatric population is lacking. The present review aimed to evaluate the efficacy of omega-3 supplementation among children with NAFLD.

Methods A systematic review of all randomised controlled trials (RCT) on NAFLD patients aged 18 or under was conducted using 16 multiple databases including Medline, EMBASE and Cochrane Central Register of Controlled Trials. PRISMA guideline was followed. The search was conducted by two independent reviewers, with discrepancies resolved by the third reviewer. Outcomes were categorised into anthropometric (e.g. body mass index), cardio-metabolic (e.g. triglycerides and insulin resistance) and hepatic outcomes (e.g. liver enzymes). Using mean differences (MD), meta-analysis was conducted on outcomes reported in more than one study using a random-effect model. If only median and inter-quartile ranges were provided, they were transformed into mean and standard deviation before meta-analysis. Heterogeneity was examined using I^2 statistics. The Cochrane Collaboration's tool for assessing the risk of bias was used to examine the quality of the included studies.

Results After screening 2962 papers, six papers with 326 subjects from five RCT were included in the present review. The included studies were conducted in Canada, Italy, Poland and Turkey. Omega-3 supplementation significantly increased body mass index z-score (MD=0.09), reduced the levels of serum triglycerides (MD=−9.52) and alanine aminotransferase (ALT) (MD=−12.04), and improved insulin sensitivity (MD of the homeostasis model assessment of insulin resistance=−0.49). Heterogeneity was low (below 30%) across various outcomes, and the study quality was generally high, with three papers having low risks of bias in all six domains.

Conclusions To conclude, omega-3 supplementation reduced serum triglycerides and ALT, and improved insulin sensitivity among children with NAFLD. It may act as a potential supplementation for paediatric NAFLD patients. But more trials should be conducted, particularly in Asian regions.

IDDF2018-ABS-0124 IDENTIFICATION OF MIR-148A IN PLASMA AS A POTENTIAL NONINVASIVE BIOMARKER FOR HEPATOCELLULAR CARCINOMA

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Background Detection of microRNA (miRNA) aberrations in the peripheral plasma is a new approach for hepatocellular carcinoma (HCC) screening. The aim of this study was to characterise miR-148a in the peripheral plasma as a non-invasive biomarker for diagnosis of HCC.

Methods Plasma-based miR148a analysis was performed on 346 plasma samples, including 155 HCCs, 96 liver cirrhosis and 95 healthy controls by using quantitative Real-Time PCR (qRT-PCR). Subsequently, plasma-based miR148a levels were validated in 97 pairs of HCC followed-up after removal of

the primary tumour. Finally, Receiver operating characteristics (ROC) curves were generated to confirm predicting the value of plasma-based miR148a in HCC.

Results Plasma-based miR-148a expression was significantly lower in 155HCCs compared to 96 liver cirrhosis ($p<0.01$) as well as 95 healthy control ($p<0.01$). Upon removal of the primary HCC tumour, levels of plasma-based miR-48aincreased significantly compared with their initial levels ($p<0.0001$). The area under receiver operating characteristic (AUROC) curve for plasma-based miR-148a was 0.919, with a sensitivity of 89.6% and specificity of 89.0% for HCC patients compared with liver cirrhosis. In HCC with negative or less expressing AFP, the AUROC values of plasma-based miR148a were 0.949 with a sensitivity of 90.6% and specificity of 92.6%.

Conclusions Plasma-based miR-148a can be applied as a potential non-invasive biomarker for HCC screening, especially for HCC with negative or less expressing AFP, which can make up AFP deficiency in predicting HCC occurrence.

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IDDF2018-ABS-0133 PERFORMANCE OF NON-INVASIVE BLOOD PARAMETERS FOR DETECTING SIGNIFICANT LIVER FIBROSIS IN PATIENTS WITH CHRONIC HEPATITIS B

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Background Since liver biopsy is invasive and Fibroscan has limited availability, various non-invasive blood parameters need evaluation to find the most useful parameter for detection of significant fibrosis in patients with chronic hepatitis B(CHB).

Methods In this retrospective study, records of patients who underwent liver biopsy for treatment naive CHB, were evaluated to obtain various non-invasive blood parameters (AST-platelet ratio index[APRI], Fibrosis-4[Fib-4], GGT-platelet ratio [GPR], GGT-to-albumin ratio[GAR]), in addition to Fibroscan, to detect significant fibrosis and compared these with fibrosis stage of liver biopsy.

Abstract IDDF2018-ABS-0133 Table 1

Parameter	Formula	N	AUROC	95% CI	P value	Best cut-off	PPV	NPV
APRI	(AST/ULN) *100/Plt	107	0.687	0.533–0.840	0.030	0.935	33%	93%
Fib-4	(Age*AST)/(Plt*?ALT)	107	0.735	0.590–0.880	0.006	2.324	37%	93%
GPR	(GGT/ULN) *100/Plt	91	0.727	0.577–0.876	0.015	0.444	28%	95%
GAR	GGT/Alb	90	0.688	0.516–0.860	0.037	17.848	35%	92%
Fibroscan	-	92	0.768	0.633–0.902	0.009	5.35	17%	100%

Results A total of 125 were included (median age 34 [range 11–82] years, 74%males). Most (83%) patients were HBeAg negative. Liver biopsy revealed nil/mild fibrosis (Ishak <3) in 87% patients and significant fibrosis (Ishak ≥3) in 13% patients. Among non-invasive blood parameters, APRI and Fib-4 were available in 107 patients, GPR in 91, and GAR in 90. Fibroscan was available in 92 patients. All the blood parameters, as well as Fibroscan, were able to detect significant fibrosis significantly well ($p<0.05$). All parameters had PPV <35% but NPV above 92%. Fibroscan had the highest NPV (100%) at a cut-off <5.35 kPa, and among the blood parameters, GPR had highest NPV (95%) at a cut-off <0.444 (table 1).

Conclusions Non-invasive blood parameters (APRI, Fib-4, GPR, and GAR) with NPVs above 92% are excellent parameters for ruling-out significant fibrosis in patients with CHB. Among the blood parameter, GPR has the best NPV of 95% at a cut-off below 0.444 and should be used when Fibroscan is not available.

IDDF2018-ABS-0137 LONGITUDINAL ASSESSMENT OF ALPHA-FETOPROTEIN, LECTIN-REACTIVE ALPHA-FETOPROTEIN, AND DES-GAMMA-CARBOXY PROTHROMBIN FOR THE EARLY DETECTION OF HEPATOCELLULAR CARCINOMA

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Background Few studies for biomarkers in hepatocellular carcinoma (HCC) have reported using prospectively collected longitudinal samples.

Methods Among 689 patients who participated to four randomised trials for cirrhosis and/or chronic hepatitis B, 42 HCC cases were diagnosed during follow up, and 168 controls were matched for age, sex, aetiology, cirrhosis, and duration of follow-up in a 1:4 ratio. Samples at the time of HCC diagnosis, months −6, and month −12 were tested for alpha-fetoprotein (AFP), lectin-reactive AFP (AFP-L3), and des-gamma-carboxy prothrombin (DCP) in the HCC cases and controls.

Results Of 42 cases with HCC, 39 (93%) had cirrhosis, 36 (85.7%) had normal alanine aminotransferase, and 31 (73.8%) had single HCC<2 cm (38 [90.5%] within Milan criteria). AFP and AFP-L3 started to increase from 6 months before diagnosis of HCC ($p<0.05$), while remained unchanged in the controls. The area under the receiver operator characteristic curves (AUROCs) for AFP, AFP-L3, and DCP at month 0 were 0.77, 0.73, and 0.71, respectively. Combining AFP and AFP-L3 showed higher AUROC of 0.83 at HCC diagnosis, while including DCP did not further improve performance (AUROC, 0.86). With the optimal cutoff values (AFP, 5 ng/mL and AFP-L3, 4%), sensitivity and specificity of combined AFP and AFP-L3 were 79% and 87%, respectively.

Conclusions AFP and AFP-L3 increased from 6 months before the diagnosis of early-stage HCC. AFP and AFP-L3 combination showed better performance than single biomarkers. Adopting a cutoff value of AFP level at 5 ng/mL would significantly increase the sensitivity for HCC detection.