Medical Oral Presentations

Video or verbal? A randomised trial of the informed consent process prior to endoscopy.

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Session 1: General Plenary Session (Joint Session), November 21, 2018, 11:55 AM - 12:15 PM

Introduction: Informed consent (IC) prior to endoscopy is often inconsistently and poorly performed. We compared use of video assisted consent to standard verbal consent in improving patient's recollection of procedural risks, experience, satisfaction, and perceived understanding.

Methods: Following national ethics approval, 200 patients attending for gastroscopy or colonoscopy were randomised to either video-assisted consent (n=100) or verbal consent (n=100). The primary outcomes measured via a questionnaire were the recollection of procedural risks (sum of all correct answers for risk recall items) and patient experience. Secondary outcomes included reported satisfaction, fulfilment of expectations and perception of understanding.

Results: There was no difference between video or verbal groups in terms of risk recall scores (p=0.46) which was extremely low in both groups (Table 1). Less than half the patients were able to recall more than 2 risks. The majority of patients (96%) in both arms of the study stated that they had a good understanding of why the procedure was being done and what to expect.

Conclusions: Video-assisted consent made no significant difference to the IC process in terms of patient recollection or experience compared to usual verbal IC. Despite very poor recollection of procedural risks, patients in both the video and verbal groups reported understanding of the procedure and satisfaction with the IC process. Reasons for this mismatch are unclear. Studies directed at quantifying patient understanding and satisfaction, as well as standardising the IC process in endoscopy to make it acceptable to patients and staff, are required.

Risk Correctly Identified	Video N=81 n,(%)	Verbal N=76 n (%)	Odds Ratio (95% CI)	P Value
Bleeding	79 (96)	64 (84)	5.37 (0.94-30.8)	0.059
Perforation	45 (56)	53 (70)	0.63 (0.29-1.36)	0.24
Infection,	32 (40)	30 (39)	1.18 (0.63-2.21)	0.60
Pain	14 (14)	10 (13)	1.36 (0.52-3.56)	0.52
Sedation risk	18 (22)	12 (16)	1.39 (0.67-2.91)	0.38
Procedure Failure	2 (2)	11 (14)	0.51 (0.17-1.57)	0.24
Missed Pathology,	0 (0)	1 (1)	0.40 (0.02-6.7)	0.53

Table 1: Outcome Analysis: Estimates comparing Video Group to Verbal Group.

Green kiwifruit for the relief of constipation and improving digestive comfort in patients with functional constipation and constipation predominant irritable bowel syndrome – analysis of 3 international trial centres.

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Session 4A: Luminal - Free Papers, Conference Room 2, November 22, 2018, 9:00 AM - 9:15 AM

Introduction

Constipation, contributing to gastrointestinal discomfort, affects 17% of the population. There is demand for natural, food interventions to address gastrointestinal discomfort, including constipation.

Methods

Three randomized, controlled, cross-over single-blind trials were performed in New Zealand, Italy, and Japan to assess the effect of green kiwifruit on digestive comfort. Each study comprised three cohorts: 20 healthy controls, 20 functional constipation (FC), 20 irritable bowel syndrome with constipation (IBS-C) (Rome III). The16 week study comprised 2-week lead in, 4-week intervention, 4-week washout, 4-week intervention, and 2-week follow-up. Interventions were 2 green kiwifruit daily [*Actinidia deliciosa* var. Hayward], and psyllium 7.5g daily. The primary outcome was quantification of complete spontaneous bowel movements (CSBM). Secondary outcome measures included the Gastrointestinal Symptom Rating Scale (GSRS), the IBS-QoL questionnaire and stool consistency (Bristol Stool Scale).

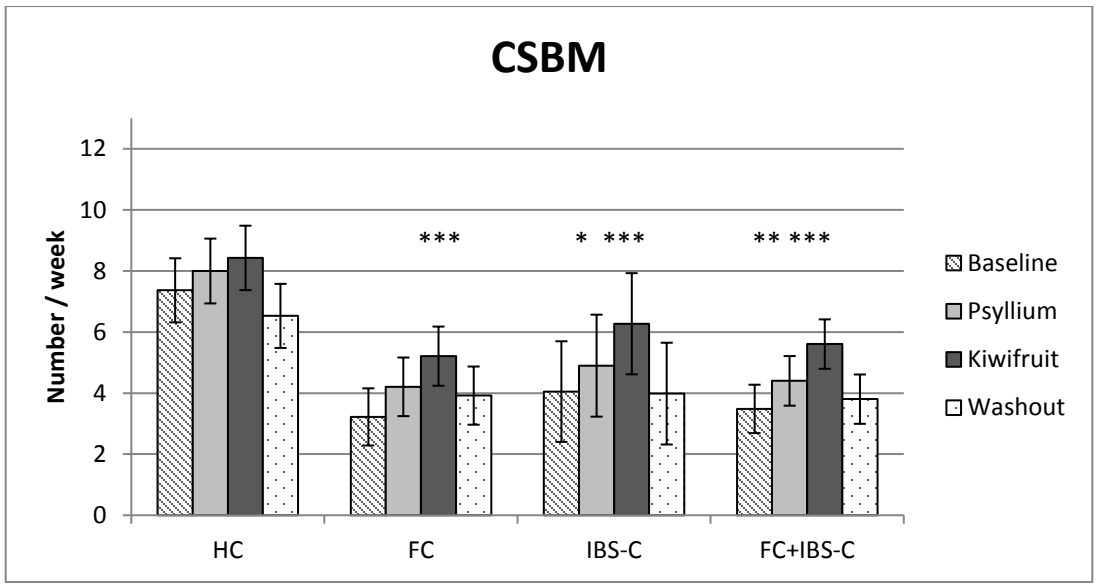
Results

178 participants were analysed (ITT) (61 healthy, 57 FC, 60 IBS-C). Green kiwifruit consumption significantly increased CSBM by 2.1/ week for the constipated group (Figure 1) compared to an increase of 0.92 / week with psyllium. The green kiwifruit intervention also resulted in significant improvements in digestive comfort ($p<0.001$). IBS-QoL scores improved significantly with kiwifruit (90 *vs* 85, $p<0.001$) compared to psyllium (89 vs 85, $p < 0.001$) for the constipated group. Both primary and secondary outcome measures returned to baseline once treatment with kiwifruit ceased.

Conclusions

Results suggest non-inferiority of kiwifruit compared with psyllium and support first line empiric treatment with fibre or green kiwifruit as an appealing and efficacious alternative.

Figure 1: Complete Spontaneous Bowel Movements for three trials combined (ITT)


CSBM
Number / week
12
10
8
6
4
2
0
***
* ***
** ***
HC
FC
IBS-C
FC+IBS-C
Baseline
Psyllium
Kiwifruit
Washout

The relationship between FODMAP intake and acute gastrointestinal symptoms in adults with IBS – A novel analysis using the FAST Diary.

Miss Alice Macintosh[1], Ms Morag Wright-McNaughton[1], Professor Richard Gearry[1], Dr Paula Skidmore[1], Professor Chris Frampton[1], Dr Jane Muir[2], Ms Erin Dwyer[2]
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Session 4A: Luminal - Free Papers, Conference Room 2, November 22, 2018, 9:15 AM - 9:30 AM

Introduction:
Low fermentable oligosaccharide, disaccharide, monosaccharide and polyols (FODMAPs) diet alleviates symptoms in irritable bowel syndrome (IBS) patients. However, there is little data concerning the acute impact of FODMAP containing foods on acute gastrointestinal symptoms. We aimed to investigate the relationship between total and individual FODMAP intake and acute gastrointestinal symptoms in IBS adults.

Methods:
103 participants with IBS were recruited. Participants completed a food and symptom diary over three non-consecutive days. Abdominal pain, bloating, swelling, distension and bowel motions, which were recorded on a 24-hour scale stating the time, duration and severity were assessed. Food diaries were entered into FODMAP analysis software to analyze the FODMAP content of each meal. Symptom data were recorded into an excel sheet. ANOVA tests and receiver operating characteristic (ROC) curves were used to investigate the relationship between total and individual FODMAP intake and acute gastrointestinal symptoms. Ethical approval was granted by the University of Otago Ethics Committee H16/094.

Results:
Abdominal pain and increased bowel motions were associated with a significantly higher FODMAP (3.98g v 3.24g and 4.27g v 3.12g, $p<0.05$), and fructan intake (0.77g v 0.48g and 0.76g v 0.47g, $p<0.05$). Overall there were no significant correlations between FODMAP intake and presence of abdominal symptoms. FODMAP intake correlated significantly with increasing acute bowel motions following a meal. Oligosaccharides intake was correlated with increasing abdominal pain, fullness and bowel motion frequency ($p<0.05$). Lactose intake was associated with lower severity of abdominal fullness and swelling, and a higher excess fructose intake was associated with a higher severity of abdominal swelling.

Conclusion:
These findings support the role of FODMAPS in acute symptom onset however, the amount and type of FODMAPs triggering symptoms varies between individuals for most FODMAPs. Future research should investigate the relationship between the effect of individual FODMAPs on acute symptoms for each subtype.

The incidence of Inflammatory Bowel Disease in the Manawatu region 2011 - 2015

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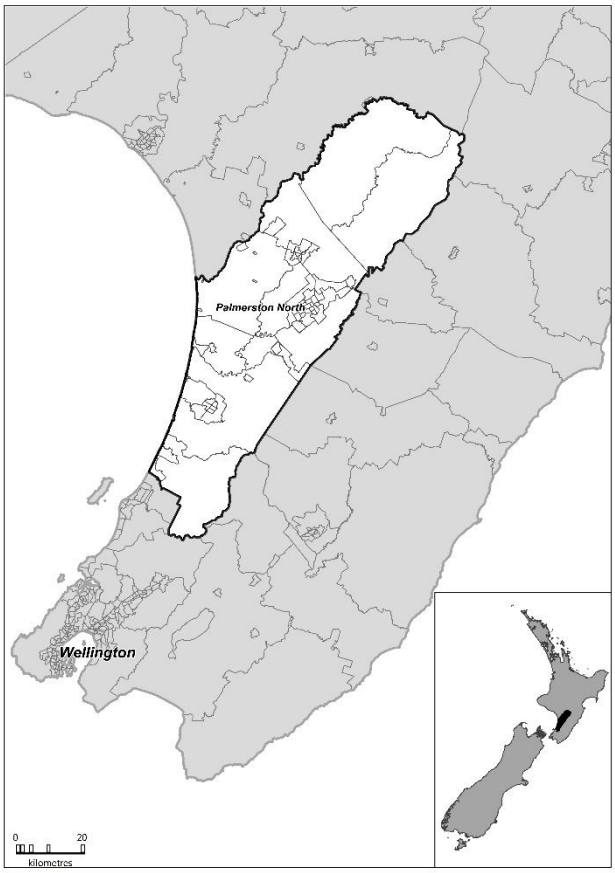
Session 4A: Luminal - Free Papers, Conference Room 2, November 22, 2018, 9:30 AM - 9:45 AM

Introduction:
Incidence and prevalence data for the Inflammatory Bowel Diseases (IBD), Crohn's Disease (CD), Ulcerative Colitis (UC) and IBD-type unknown (IBD-TU), provide insight into temporal trends of disease, and inform planning of health service delivery.

Methods:
Ethical approval was received from the Health and Disability Ethics Committee and Manawatu District Health Board Ethics Committee. Patients were identified through extensive keyword and diagnostic code searches across all accessible repositories. Diagnostic information available in the six weeks prior to diagnosis, and 12 months post diagnosis, were individually evaluated and each incident diagnosis confirmed according to the Lennard Jones criteria, with a minimum symptom duration of six weeks. Information for patients diagnosed prior to 01/01/2011 was also recorded, and using 2013 census data, the crude prevalence of IBD in the study region was determined.

Results:
4,485 patients were evaluated. Patients were identified through all public hospital inpatient admissions (267/114,275; numbers represent *patients identified / events searched*), all public and private gastroenterology and general surgery clinic letters (3,319/74,049), colonoscopy and flexible sigmoidoscopy reports (830/7,167), histology reports (ileal or colonic specimen location (2,971/13,904), radiology reports (1,186 patients identified), all region wide thiopurine-methyl-transferase (TPMT) and thioguanine blood testing (652), and all region wide prescription data (1,405).
In the study region (2013 population 146,079), from 01/01/2011-31/12/2015, 222 patients were diagnosed with IBD. The annual incidence per 100,000 persons per year was 30.4 for IBD, 16.6 for CD, 11.4 for UC and 2.5 for IBD-TU. The principal data sources that identified patients were histological data (202/222), followed by public clinic data (182/222), then prescription data (174/222). The crude 2013 prevalence of IBD, CD, UC and IBD-TU was 618.2, 334.1, 267.7 and 15.7 per 100,000 persons respectively.

Conclusions:
These data will inform health service delivery in the Manawatu, and will allow description of temporal trends in IBD incidence and prevalence.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An International Multicentre Validation Study of the Toronto Listing Criteria for Paediatric Intestinal Transplant

Dr Amin Roberts[1,2], Dr Paul Wales[1,3], Dr Sue Beath[4], Dr Helen Evans[1], Dr Johnathan Hind[5], Dr David Mercer[6], Dr Theodoric Wong[4], Dr Jason Yap[7], Ms Christina Belza[2], Dr David Grant[8], Dr Yaron Avitzur[2,9]
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Session 4A: Luminal - Free Papers, Conference Room 2, November 22, 2018, 9:45 AM - 10:00 AM

Introduction

The accepted intestinal transplantation (IT) listing criteria from 2001 have limited ability to predict the need for IT in the current era of intestinal failure (IF). New criteria were proposed in 2015* including ≥ 2 intensive care unit (ICU) admissions, loss of ≥ 3 central venous catheter (CVC) sites, and persistent elevation of conjugated bilirubin (CB ≥ 75μmol/L) following 8 weeks of lipid strategies. We conducted an international multicentre study to validate these criteria.

Methods

A retrospective, international, multicentre cohort study of 443 children from 6 centres (61% male, median gestational age 34 weeks [IQR 29-37]), diagnosed with IF between 2010 & 2015, was performed to validate the Toronto Listing criteria. Primary outcome measure was death/transplant. Sensitivity, specificity, negative & positive predictive value (NPV & PPV) and probability of death or transplant (OR with 95% confidence intervals) were calculated for each criterion.

Results

Median age at diagnosis was 0.1 years (0.03-0.14) with median follow-up of 3.8 years (2.3-5.3). 40/443 patients died and 53/443 were transplanted, of which 11 patients died post-transplant. Validation of the three proposed Toronto criteria demonstrated high OR, specificity and NPV and modest PPV (Table-1).

Conclusions

This large, multicentre, international study in a contemporary cohort of IF patients, confirms the validity of the Toronto criteria across the world. These new validated criteria can therefore guide listing decisions in paediatric IT.

Table-1:

Toronto Listing Criteria	**PPV**	**NPV**	**Sensitivity**	**Specificity**
≥ 2 ICU admissions	70%	82%	17%	98%
Loss of ≥ 3 CVC sites	58%	81%	12%	98%
Persistent CB ≥ 75μmol/L following 8 weeks of lipid strategies	48%	90%	56%	88%
Toronto Listing Criteria		**Odds Ratio**	**95% CI**	**p-value**
≥ 2 ICU admissions		10.2	4.0 – 25.6	<0.0001
Loss of ≥ 3 CVC sites		5.7	2.2 – 14.7	0.0003
Persistent CB ≥ 75μmol/L following 8 weeks of lipid strategies		8.2	4.8 – 13.9	<0.0001

*Burghadt KM et al. Pediatric Intestinal Transplant Listing Criteria – A Call for a Change in the New Era of Intestinal Failure Outcomes. *American Journal of Transplantation* 2015; 15: 1674-81.

Body image dissatisfaction is increased in inflammatory bowel disease compared to healthy matched controls but not diseased controls.

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Session 4A: Luminal - Free Papers, Conference Room 2, November 22, 2018, 10:00 AM - 10:15 AM

Introduction
Body image dissatisfaction (BID) is increased in inflammatory bowel disease (IBD) and also in other chronic medical conditions. Whether the high rate of BID in IBD is a function of chronic disease in general or a particular feature of IBD is unknown.

We aimed to compare BID in IBD to age and gender matched healthy and chronic disease control groups. We chose type 1 diabetes as the control disease because of its demographic similarities to IBD but relative lack of known risk factors for BID.

Methods
A case-control study was conducted at Hutt Valley Hospital. Consecutive cases were matched 1:1 to normal and diabetes controls for age and gender.

Participant demographics were collected. Participants were asked to complete the Body Image Disturbance Questionnaire (BIDQ) and the hospital anxiety and depression score (HADS).

Results
There were 45 age and gender matched pairs for comparison of IBD and healthy controls, and 38 for IBD and diabetic controls.

The mean BIDQ was higher in IBD patients compared to controls (2.05 vs. 1.58, p=0.001) but not when compared to diabetics (2.03 vs. 1.72, p=0.77).

There was no difference in mean BMI, smoking status, or relationship status between groups.

IBD patients scored more highly than controls for depression (mean HDS 6.51 vs. 3.87, p=0.002) but not for anxiety (mean HAS 5.51 vs. 4.89, p=0.258). No difference was seen between IBD and diabetes in either HADS domain.

Conclusions
Our data indicate that while BID is increased in IBD patients, it may not relate directly to the effects of IBD itself, but rather is a feature of chronic disease. The difference in BID did not relate directly to BMI or anxiety scores but was associated with increased depression scores. This suggests there may be a role for diagnosing and treating BID in IBD patients.

IBD-KID2: a revised knowledge assessment tool for children with inflammatory bowel disease.

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Session 4A: Luminal - Free Papers, Conference Room 2, November 22, 2018, 10:15 AM - 10:30 AM

Introduction
Assessing the knowledge levels of children with IBD is vital to identify gaps or misconceptions that may affect disease management. IBD-KID2 is a revised knowledge assessment tool for children with IBD that required validation in the target population. This study was carried out in Christchurch Hospital, New Zealand among groups of participants with an established hierarchy of knowledge levels.

Methods
IBD-KID2 was administered to 4 participant groups: children with IBD (n=22), children without IBD (n=20), medical staff (n=15), administration staff (n=15). Repeat assessments were done by the IBD group to determine test-retest reliability (n=21). Between group differences were tested using ANOVA and pairwise comparisons made with the IBD group. Mean test-retest assessment scores were compared between the two time-points, and reproducibility between observers tested using the intraclass correlation coefficient. Internal reliability was examined with the Kuder-Richardson 20 formula.

Results
The total score group means (SD) were: children with IBD: 8.5 (±2.3), children without IBD: 3.7 (±2.2), medical staff: 13.5 (±1.3), administration staff: 6.3 (±2.5). The overall difference in group scores was significant ($p < 0.001$), comparisons to the IBD group were significant for all. The difference of test-retest mean scores at baseline (8.4, CI ±2.4) and repeat (9.0, CI ±2.4) were not significant. Intraclass correlation coefficient was high at 0.82. Internal reliability was calculated at 0.85.

Conclusion
IBD-KID2 was able to correctly distinguish between groups of participants with varying assumed knowledge levels. Repeat assessments of IBD-KID2 in the group of children with IBD shows comparable scores on re-test. Internal consistency was high, indicating that the items in the revised tool are measuring a homogenous concept. IBD-KID2 is a valid and reliable tool for use in the paediatric IBD population. Further analysis will be undertaken on the initial response patterns to identify any issues that need attention.

Surveillance factors change outcomes in patients with hepatocellular carcinoma due to chronic hepatitis C virus infection in New Zealand

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Session 4B: Hepatology - Free Papers, Dunedin Centre, Conference Room 1, November 22, 2018, 9:00 AM - 9:15 AM

Introduction
Surveillance for Hepatocellular Carcinoma (HCC) with 6 monthly imaging is recommended for patients with cirrhosis from chronic hepatitis C virus (HCV) infection. International studies report poor adherence. The primary aim of this study was to review all cases of HCC secondary to HCV to elucidate method of HCC detection and its impact on subsequent clinical outcomes, in particular treatment and survival.

Methods
Following institutional ethical approval, we completed a retrospective nationwide cohort study on all cases of confirmed HCC in patients with HCV from 31 January 2001 to 31 May 2018. Information was collected and categorized from a computerized clinical database where available. Physical patient records were retrieved including records from general practitioner referrals and secondary care clinic letters for further detail if required.

Results
520 patients were reviewed. 224 (44%) of cases were diagnosed via routine surveillance (Group 1). 12.4% were without routine surveillance due to documented poor medical compliance, non-attendance or being lost to follow-up (Group 2). 2% were diagnosed without routine surveillance despite having known cirrhosis (Group 3), 2.5% after only intermittent surveillance (Group 4), 19% were not known to be cirrhotic (Group 5) and 21% of patients had newly diagnosed HCV (Group 6). Based on these methods of detection, there were significant differences in curative treatments available and overall survival (Table 1). Routine surveillance was the only significant predictor of survival OR 0.70 (95% CI [0.54, 0.91], p=0.01).

Conclusions
Adherence to HCC surveillance remains poor, resulting in late diagnosis, low rates of curative therapy and poor outcomes. Under-diagnosis of HCV infection and lack of diagnosis of cirrhosis in patients known to have HCV infection are the current barriers to implementation of effective HCC surveillance strategies.

Group Method HCC Detected	1 n=224 (44%)	2 n=63 (12.4%)	3 n=10 (2%)	4 n=13 (2.5%)	5 n=95 (19%)	6 n=105 (21%)	P value
Treatment n (%)							<0.01
Transplant	59 (26.3)	1 (1.6)	1 (10.0)	2 (15.4)	8 (8.4)	11 (10.5)	
Resection	22 (9.8)	2 (3.2)	1 (10.0)	2 (15.4)	18 (18.9)	6 (5.7)	
RFA	66 (29.9)	11 (17.5)	0 (0)	2 (15.4)	10 (10.5)	6 (5.7)	
TACE	41 (18.3)	11 (17.5)	0 (0)	2 (15.4)	15 (15.8)	14 (13.3)	
Palliative	36 (16.1)	38 (60.3)	8 (80.0)	5 (38.5)	44 (46.3)	68 (64.8)	
Survival mean, months (95% CI)	91.5 (76.4-106.6)	22.0 (15.3-28.7)	23.1 (6.6-39.7)	59.1 (23.0-95.3)	53.0 (36.5-69.4)	64.6 (55.8-73.4)	<0.0001

Table 1: Outcomes based on surveillance factors.

Ultrasound-guided liver biopsy is a safe procedure in children: a retrospective review of practice at Starship Child Health

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Session 4B: Hepatology - Free Papers, Conference Room 1, November 22, 2018, 9:15 AM - 9:30 AM

Introduction
Liver biopsy (LB) is an important investigation in the diagnosis of liver disease and assessing allograft status after liver transplantation (LT) in children. There are few data on the safety, frequency of complications or factors contributing to an increased complication rate. Understanding these may allow the development of a same day discharge protocol.

Methods
Retrospective case note review for all children undergoing ultrasound-guided percutaneous LB by interventional radiologists, under general anaesthesia, 2007 to 2017 inclusive. A complete list of LBs performed was obtained by cross-referencing operating theatre and histopathology records.

Results
850 LBs were performed in 396 children with a median age 5.5 years (range 7 days to 18 years). Indications included abnormal liver biochemistry (55%), transplant protocol biopsy (16%) and neonatal cholestasis (13%). 57% of LBs were in LT patients. Complications occurred in 4% of LBs. Transplanted livers had a non-significantly higher rate of complication (5%) than non-transplant livers (3%; p=0.09). LT patients had a higher rate of complications for any LB in the study period (13%) compared to non-LT patients (5%; p=0.04) but in general each LT patient underwent more LBs (median 5 vs 1; p<0.001). Pain requiring opiate analgesia was the commonest complication (n=22) followed by fever requiring antibiotics (n=6). Bacteraemia (n=1) and bleeding (n=4) were only seen in LT patients. No patient required a blood transfusion. Children with a percutaneous biliary or abdominal drain had an increased rate of fever (4.7% vs 0.5%; p=0.01).

Conclusions
Ultrasound-guided LB is a safe procedure in children, supporting same day discharge for most patients. The risk of complications is increased in LT patients which may be related to the greater number of LBs they undergo compared to non-transplant patients. Overnight observation may be advisable in children with a percutaneous biliary drain.

Dietary triggers of non-alcoholic fatty liver disease – fat, carbohydrate or excess energy: a crossover trial.

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Session 4B: Hepatology - Free Papers, Conference Room 1, November 22, 2018, 9:30 AM - 9:45 AM

Introduction
Obesity is a key risk factor for non-alcoholic fatty liver disease (NAFLD), and diet appears to be a critical factor in the pathogenesis. The Trigger study examined the effect of four different experimental diets on liver fat and markers of NAFLD.

Methods
This crossover trial randomised healthy weight premenopausal women to either a hypercaloric or isocaloric diet following a 2-week standard diet. Participants consumed a dietitian supervised moderately high fat (35-40% of total energy (TE)) diet for 4 weeks and a moderately high carbohydrate (55-65% TE) diet for 4 weeks with an 8-week washout period between diets. The sequence of the diets was randomised. Anthropometric measures were taken, a questionnaire completed and blood tests included liver function tests. Weighed 3-day food records were completed at seven time points. Liver fat was measured by H-MRS. Dietary data were analysed using Kaiculator; a New Zealand based dietary assessment programme. Descriptive statistics were calculated for variables of interest.

Results
Sixteen women (20-54 years) completed baseline measures, and 12 completed the study. At baseline median energy intake was 7844 kilojoules (kJ) (IQR 6474-8575). The macronutrient proportions of TE varied from 11-21% (median 15%) for protein, 24-63% (median 50%) for carbohydrate, and 18-50% (median 36%) for fat. Median fibre intake was 24.0g (IQR 20.8-27.8). The isocaloric diet group maintained their bodyweight. The hypercaloric diet participants gained 0.8-4.8% bodyweight during each 4-week diet period. Alanine aminotransferase (ALT) levels increased more often following a hypercaloric diet compared with an isocaloric diet (80% vs 43%). Completed statistical analysis of liver function tests and hepatic fat results will be reported.

Conclusion
Consumption of excess dietary energy resulting in weight gain is likely to increase ALT and hepatic fat content, whereas changing dietary macronutrient composition only without changing TE intake is less likely to affect the liver.

Are patients with Chronic Hepatitis B receiving recommended HCC surveillance ?

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Session 4B: Hepatology - Free Papers, Conference Room 1, November 22, 2018, 9:45 AM - 10:00 AM

Background
Incidence of Hepatocellular carcinoma (HCC) is increasing in New Zealand. Targeted HCC surveillance in high-risk patients can improve clinical outcome. The aim of our study was to establish epidemiology of Chronic hepatitis B (CHB) in Canterbury district and assess adherence to HCC surveillance guidelines.

Methods
Results of all patients that underwent Hepatitis B serology test in any of the laboratory in Canterbury from July 2012 to June 2018 were searched. Patients with CHB were defined by presence of HbS antigen. Clinical data was obtained for patients attending secondary care and data was extracted on 31/7/18. HCC surveillance was assessed using current recommendation from the American Association for the Study of Liver Diseases (AASLD).

Results: Two hundred and thirty patients were identified with CHB in Canterbury, of which 110 patients (47.8%) were male. Majority of the patients were of Asian ethnicity (46.1%), followed by Maori (19.1%) and Pacific peoples (14.8%). Asian patients were younger compared to Europeans (median age 35 years compared to 48 years, $p<0.01$). The prevalence of CHB in Canterbury on 1/6/2018 was 42.29 cases per 100,000 (95%CI 37.17-48.13). Majority of patients were E-antigen negative (63.3%). Forty six patients (20%) were on viral suppression treatment (34, 8 and 2 patients on Entecavir, Tenofovir & Lamivudine respectively). Based on the AASLD recommendations, 44 patients were identified to be at high-risk of developing HCC, requiring 6 monthly ultrasound surveillance. Of these, only 12 patients (27.3%) underwent regular screening liver ultrasound, and 25 patients (56.8%) underwent alpha-fetoprotein (AFP) monitoring. Three patients were diagnosed with HCC.

Conclusion: This is a first study to assess epidemiology of CHB in Canterbury. Majority of the high-risk patients are currently not receiving recommended HCC surveillance. Steps to improve adherence to guidelines are necessary in order to improve clinical outcomes in these patients.

Hepatitis B Virus Related Hepatocellular Carcinoma Presenting at an Advanced Stage: Is it Preventable?

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Session 4B: Hepatology - Free Papers, Conference Room 1, November 22, 2018, 10:00 AM - 10:15AM

Introduction
Earlier diagnosis of hepatitis B virus (HBV) related hepatocellular carcinoma (HCC) increases treatment options and survival. The aim of this study is to evaluate which factors are associated with late presentation of HBV-related HCC.

Methods
This is a retrospective review of all cases of HBV-related HCC presenting with late-stage/incurable HCC in New Zealand between 2003 and 2017. Patients were categorised into four groups according to potential reasons for late presentation: no previous diagnosis of HBV infection (Group A); known HBV diagnosis but not receiving HCC surveillance (Group B); known HBV diagnosis and receiving suboptimal HCC surveillance (Group C); and known HBV diagnosis and receiving optimised HCC surveillance (Group D).

Results
A total of 368 patients were reviewed. The average age at death was 59 years, and the majority of patients were Māori (39%), Pacific (34%) or Asian (20%). The incidence of patients presenting with HBV-related advanced HCC increased from 4.5 cases to 6.3 cases per million people over the review period. Of the cases, 40% were categorised into Group A, 26% into Group B, 12% into Group C, and 23% in Group D. Overall, the median survival was 138 days, and this did not change during the study period. Patients receiving optimised surveillance (Group D) survived longer (mean 469 days) than patients in Group A (90 days), Group B (145 days), or Group C (152 days) ($p<0.05$). Patients in Group D were more likely to be treated with transarterial chemoembolisation than patients in other groups (40% vs. 15%, $p<0.05$).

Conclusions
This study has highlighted the need for improved rates of HBV diagnosis, better follow-up of those infected, and the importance of optimal HCC surveillance. In New Zealand, HBV-related HCC disproportionately affects minority ethnic groups, and given the increasing incidence, provides a potential domain to reduce health inequities.

The utility of shear wave elastography to predict oesophageal varices, morbidity and mortality, in patients with advanced hepatic fibrosis

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Introduction
There is a strong need for non-invasive methods to predict complications in subjects with advanced chronic liver disease (CLD). Shear Wave Elastography (SWE) is an excellent tool to assess hepatic fibrosis, particularly in obese populations, but little data is available for its ability to predict complications such as oesophageal varices (OV). This study aimed to determine the utility of SWE to predict OV, morbidity and mortality in subjects with chronic liver disease and advanced hepatic fibrosis.

Methods
Data from 1120 subjects with CLD who underwent SWE at Middlemore Hospital, between 1st July 2015 and 31st October 2017 were assessed. Subjects with advanced fibrosis (liver stiffness (LS) ≥8.1 kPa for HBV; ≥9.5 other aetiologies) were included. Endoscopic findings (within 12 months of SWE), clinical and biochemical parameters were evaluated. Morbidity and mortality data were collected up to 3 years. Diagnostic performance of SWE to predict OV was evaluated using the area under the receiver operating curve (AUROC). Logistic and Cox regressions were utilised for morbidity and mortality analyses.

Results
Of 302 patients with advanced fibrosis, 89 had endoscopic data. In these subjects, 18 had OV. The AUROC for SWE to predict OV was 0.74, superior to platelet count alone (AUROC 0.69, p=0.014). Combining SWE with serum albumin improved the diagnostic accuracy (AUROC 0.8). Subjects with LS <12.4kPa and albumin >37g/L had a sensitivity of 88% and a negative predictive value of 94% for OV. SWE-derived LS correlated significantly with number of all-cause (p=0.001), liver-disease-related (p<0.001) and infection-related (p=0.007) hospital admissions. On multivariate cox-regression, LS (p=0.038) and age (p=0.031) were predictors of mortality.

Conclusion
SWE could be a useful non-invasive test to select patients for endoscopic screening, and also predicts morbidity and mortality in subjects with advanced hepatic fibrosis.