Aims and methods This prospective longitudinal study aimed to identify whether standard and/or novel biomarkers are useful for monitoring and predicting LN disease activity. Using patients recruited to the UK JSLE study, urine and blood samples were collected during routine clinical reviews. The study had full ethical approval.

Results The JSLE cohort (n = 64), seen at 3 (interquartile range IQR: 2–5) clinical reviews over 364 (182–532) days were aged 14.1 (11.8–15.8) years and 80% female. Active renal episodes (23% total; renal BILAG A/B) had significantly increased concentration of; monocyte chemoattractant protein 1 (MCP1), neutrophil gelatinase associated lipocalin (NGAL), erythrocyte sedimentation rate, anti-double stranded DNA, urine albumin:creatinine ratio (UACR), creatinine, and reduced complement 3 (C3), C4 and lymphocytes. Cross sectional multivariate analysis demonstrated MCP1 and C3 as independent variables ($p < 0.001$) for active renal disease. Longitudinally, MCP1 was an excellent predictor of improved renal disease (area under the curve AUC: 0.81; $p = 0.013$; concentration 343pg/ml, specificity 71%, sensitivity 70%); NGAL was a good predictor of worsened renal disease activity (AUC 0.76; $p = 0.04$; concentration 30ng/ml, specificity 60%, sensitivity 61%). Standard markers could not predict disease activity changes.

Conclusion Novel biomarkers (MCP1, NGAL) are able to predict changes in JSLE related renal disease activity. Biomarker-led monitoring may facilitate earlier intervention to prevent renal damage. The development of point of care biomarker testing is now in progress.

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P04 ADIPOSITY OF HEALTHY, FULL-TERM BREAST-FED AND FORMULA-FED INFANTS: A PROSPECTIVE COHORT STUDY

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Aims Although an association exists between method of feeding in infancy and increased risk of later overweight and obesity, it is unclear whether this represents a causal relationship. One plausible mechanism of action is through alteration in adiposity in infancy. We aimed to compare longitudinal changes in adiposity in healthy, full-term, breast-fed (BF) and formula-fed infants (FF).

Methods Research Ethics Committee and NHS approvals were obtained. With informed maternal consent, healthy, term infants underwent whole body magnetic resonance imaging and hepatic spectroscopy to assess body composition and intrahepatocellular lipid (IHCL) content. Investigations were performed in natural sleep on two occasions, shortly after birth (T1), and between two and three months (T2) in accordance with our previously published protocols. Anthropometric measurements were obtained at both visits. Feeding was categorised according to World Health Organisation definitions. Comparison was made between exclusively or predominantly BF, and exclusively or predominantly FF infants. We used independent sample t-tests to compare body weights and multivariable regression to examine total and regional adipose tissue volumes at T2, with adjustment for baseline adiposity and body weight. Adipose tissue volumes (litres) and IHCL (ratio of lipid to water peak) are presented as mean (95% confidence interval).

Results Eighty-six infants were studied at T1, median [interquartile range] 13 [8–19] days, and 73 at T2, 63 [57–70] days. Of these, 38 infants were wholly or predominantly BF and 26 wholly or predominantly FF at both time points. At T2, while FF infants were heavier (mean, standard deviation: 5.399kg, 0.661kg; FF 5.435kg, 0.68kg); $p = 0.045$), total adiposity was not significantly different (BF 1.516 (1.433, 1.600); FF 1.633 (1.531, 1.735); $p = 0.08$). There were no statistically significant differences in regional adipose tissue volumes or IHCL (BF 2.398 (1.838, 2.958); FF 2.406 (1.708, 3.103); $p = 0.9$).

Conclusions While adiposity does not differ substantially between BF and FF infants by 9 weeks of age, further longitudinal evaluation is required to determine if the trend to greater total adiposity in FF infants is subsequently amplified.

P05 LEARNING FROM THE EXPERTS: UNDERSTANDING CHILDREN'S EXPERIENCES OF BEING NEWLY DIAGNOSED WITH CANCER

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Aim Being given a diagnosis of cancer is a significant and highly distressing event for both children and their families. There has been a significant amount of research looking at parents' experiences and communication preferences at the time of diagnosis but little research has been done to explore and understand children's feelings. This qualitative study aims to understand from the child's perspective what it feels like to be told you have cancer with the hope that increased understanding can lead to improved communication and support for children newly diagnosed with cancer.

Methods The study was conducted using qualitative methodology. Children from a UK principle oncology centre were purposefully selected to participate. The children were enrolled within 4 weeks of being diagnosed with cancer and took part in semi-structured interviews conducted using the draw and write technique. The interviews aimed to explore children's experiences around the time of diagnosis. The results were analysed using interpretative phenomenological analysis.

Results Six children, aged 8 – 12 years, with a new diagnosis of cancer were interviewed. Five super-ordinate themes were identified: 1) Initially I felt shocked and scared. 2) Chemo is an awful thing. 3) Please talk to me: the more I know the better I feel. 4) I will accept treatment and quickly get used to it because I know I will get better. 5) My family are vital.

Children say that initially they feel shocked and scared. They continue to feel scared until they understand exactly what will be done to them. Then despite experiencing chemotherapy as an awful event, with information and help from family, they can learn relatively quickly to accept their diagnosis and treatment. However, this acceptance is in the unquestioning belief that the treatment will lead to cure.

Conclusions Children have unique needs at the time of being diagnosed with cancer. In order to minimise suffering clinicians must be prepared to talk to children directly. Children want to know, at the earliest opportunity, what will happen to them and that there is a potential for cure.

P06 BACTERIAL MENINGITIS IN BABIES 0–90 DAYS OF AGE: A UK AND REPUBLIC OF IRELAND PROSPECTIVE STUDY

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