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## Neonatal nutrition and growth



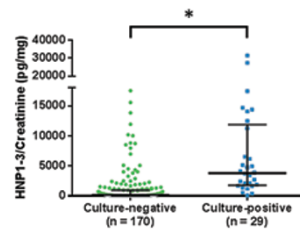
After more than 100 years of research, the optimal intake of energy and protein for preterm babies in the neonatal period remain unknown. Cormack and colleagues suggest that an important factor contributing to the lack of progress is the lack of a standardized approach to reporting nutritional intake data and growth in the neonatal literature. In this review of 22 studies, substantial variation was found in methods used to estimate and calculate nutritional intake. The authors propose a standardized checklist to address these issues. [See page 810](#)

## HIV testing for African adolescents



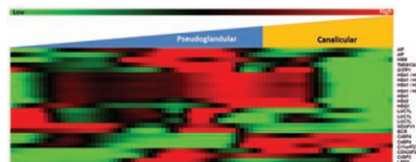
The World Health Organization has cited inadequate access to HIV testing and counseling (HTC) as a factor contributing to AIDS-related adolescent deaths, most of which occur in sub-Saharan Africa. Sam-Agudu and colleagues reviewed studies conducted in countries with a high adolescent HIV burden. They describe barriers to adolescent HTC uptake and coverage and make actionable recommendations for accelerating HTC and timely access to care. [See page 838](#)

## Novel urinary tract infection biomarkers



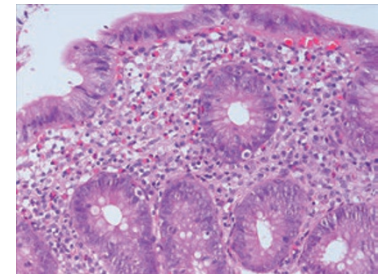
The sensitivity and specificity of urinalysis are limited. Watson and coinvestigators evaluated the diagnostic accuracy of the antimicrobial peptides human  $\alpha$ -defensin 5 (HD5) and human neutrophil peptides (HNP) 1–3 as novel urinary tract infection (UTI) biomarkers in children. Urine concentrations of HD5 and HNP1–3 were measured by enzyme-linked immunosorbent assay for 199 pediatric patients evaluated for a UTI. The results indicate that urine antimicrobial peptide profiles are a promising novel strategy to aid UTI diagnosis in children. [See page 934](#)

## Genetic susceptibility and BPD



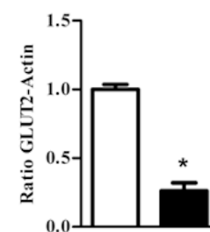
Variability in the incidence and severity of bronchopulmonary dysplasia (BPD) among premature infants suggests that genetic susceptibility plays a role in pathogenesis. An assessment of copy-number variants (CNVs) in BPD subjects may help to identify loci that harbor genetic susceptibility factors. Ahmad and colleagues identified 19 BPD subjects and preterm and term control groups with no lung-related disease. They analyzed raw data from each subject and identified three recurrent CNV loci in BPD subjects. [See page 940](#)

## Juvenile idiopathic arthritis and the gut



The association between inflammatory bowel disease and joint involvement is well established, but there is a paucity of data on histopathological features of the gut in relation to juvenile idiopathic arthritis (JIA). Pichler and coinvestigators retrospectively identified 33 children aged 3–16 years with JIA who had significant gastrointestinal symptoms and underwent upper and/or lower endoscopy. Among other pathological results, eosinophilia was found in one-third of the patients. [See page 895](#)

## IUGR and early reproductive senescence



Intapad and coinvestigators tested the hypothesis that intrauterine growth restriction programs early reproductive aging and impaired glucose homeostasis in female rats. Estrous cyclicity, body composition, and glucose homeostasis were assessed in control and growth-restricted rats at 6 and 12 months of age and levels of sex steroids at 12 months. Growth-restricted rats exhibited persistent estrus and a significant increase in adiposity, fasting glucose, and testosterone at 12 months of age. [See page 962](#)