University Hospitals Bristol NHS
NHS Foundation Trust

Paediatric Allergy

Evidence Update

March 2018

Respecting everyone
Embracing change
Recognising success
Working together
Our hospitals.

Training Calendar 2018

All sessions are one hour

March (13.00-14.00)

28th (wed) **Statistics**

April (12.00-13.00)

5th (Thu) **Literature Searching**

9th (Mon) **Critical Appraisal**

17th (Tue) **Statistics**

25th (Wed) **Literature Searching**

Your Outreach Librarian – Helen Pullen

Whatever your information needs, the library is here to help. Just email us at library@uhbristol.nhs.uk

Outreach: Your Outreach Librarian can help facilitate evidence-based practice for all in the team, as well as assisting with academic study and research. We also offer one-to-one or small group training in **literature searching, critical appraisal and medical statistics**. Get in touch: library@uhbristol.nhs.uk

Literature searching: We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a one-to-one session where we can guide you through the process of creating a well-focused literature research. Please email requests to library@uhbristol.nhs.uk

Journal Tables of Contents

If you would like any of the papers in full text then please email the library: library@uhbristol.nhs.uk

Acta Paediatrica

March 2018; Volume 107, Issue 3

Allergy

March 2018; Volume 73, Issue 3

Chest

February 2018; Volume 153, Issue 2

Clinical & Experimental Allergy

February 2018; Volume 48, Issue 2

Journal of Allergy and Clinical Immunology

February 2018; Volume 141, Issue 2

Identification of atopic dermatitis subgroups in children from 2 longitudinal birth cohorts

Lavinia Paternoster, Olga E.M. Savenije, Jon Heron, David M. Evans, Judith M. Vonk, Bert Brunekreef, Alet H. Wijga, A. John Henderson, Gerard H. Koppelman, Sara J. Brown

DOI: https://doi.org/10.1016/j.jaci.2017.09.044

p964–971

Published online: November 9, 2017

Genetic and epigenetic regulation of YKL-40 in childhood

Stefano Guerra, Erik Melén, Jordi Sunyer, Cheng-Jian Xu, Iris Lavi, Marta Benet, Mariona Bustamante, Anne-Elie Carsin, Carlota Dobaño, Mònica Guxens, Christina Tischer, Martine Vrijheid, Inger Kull, Anna Bergström, Ashish Kumar, Cilla Söderhäll, Ulrike Gehring, Dorieke J. Dijkstra, Pieter van der Vlies, Magnus Wickman, Jean Bousquet, Dirkje S. Postma, Josep M. Anto, Gerard H. Koppelman

DOI: https://doi.org/10.1016/j.jaci.2017.06.030

p1105–1114

Published online: July 21, 2017

Pediatric Allergy and Immunology
February 2018; Volume 29, Issue 1

Conditional reprogramming of pediatric airway epithelial cells: A new human model to investigate early-life respiratory disorders (pages 810–817)

S. Wolf, G. F. Perez, L. Mukharesh, N. Isaza, D. Preciado, R. J. Freishtat, D. Pillai, M. C. Rose and G. Nino

Version of Record online: 22 NOV 2017 | DOI: 10.1111/pai.12810

Inflammatory bowel disease in chronic granulomatous disease: An emerging problem over a twenty years' experience (pages 801–809)

Giulia Angelino, Paola De Angelis, Simona Faraci, Francesca Rea, Erminia Francesca Romeo, Filippo Torroni, Renato Tambucci, Alessia Claps, Paola Francalanci, Maria Chiriaco, Gigliola Di Matteo, Caterina Cancrini, Paolo Palma, Patrizia D'Argenio, Luigi Dall'Oglio, Paolo Rossi and Andrea Finocchi

Version of Record online: 21 DEC 2017 | DOI: 10.1111/pai.12814

Beta-2 receptor agonist exposure in the uterus associated with subsequent risk of childhood asthma (pages 746–753)

Kohei Ogawa, Satomi Tanaka, Yang Limin, Naoko Arata, Haruhiko Sago, Kiwako Yamamoto-Hanada, Masami Narita and Yukihiro Ohya

Version of Record online: 3 OCT 2017 | DOI: 10.1111/pai.12805

Recent Database Articles

Budesonide/formoterol maintenance and reliever therapy in adolescent patients with asthma.
Eur Respir J

1. Development of Asthma in Inner-City Children: Possible Roles of MAIT Cells and Variation in the Home Environment.

Author(s): Chandra, Shilpi; Wingender, Gerhard; Greenbaum, Jason A; Khurana, Archana; Gholami, Amin M; Ganesan, Anusha-Preethi; Rosenbach, Michael; Jaffee, Katy; Gern, James E; Wood, Robert; O'Connor, George; Sandel, Megan; Kattan, Meyer; Bacharier, Leonard; Togias, Alkis; Horner, Anthony A; Kronenberg, Mitchell

Source: Journal of immunology (Baltimore, Md. : 1950); Mar 2018; vol. 200 (no. 6); p. 1995-2003

Publication Date: Mar 2018

Publication Type(s): Journal Article

PubMedID: 29431692

Abstract: Humans have populations of innate-like T lymphocytes with an invariant TCR α-chain that recognize nonpeptide Ags, including invariant NKT (iNKT) cells and mucosal-associated invariant T (MAIT) cells. iNKT cell involvement in human asthma is controversial, whereas there has been little analysis of MAIT cells. Using peripheral blood cells from 110 participants from the Urban Environment and Childhood Asthma (URECA) birth cohort study, these cells were analyzed for number and function. We determined whether iNKT cell or MAIT cell frequency at 1 y is correlated with the cytokine polarization of mainstream CD4+ T cells and/or the development of asthma by age 7 y. Dust samples from 300 houses were tested for iNKT cell antigenic activity. Our results show that a higher MAIT cell frequency at 1 y of age was associated with a decreased risk of asthma by age 7 y. The frequency of MAIT cells was associated with increased production of IFN-γ by activated CD4+ T cells from the URECA cohort. iNKT cell antigenic activity in bedroom dust samples was associated with higher endotoxin concentration and also with reduced risk of asthma. In conclusion, MAIT cell frequency at 1 y may reflect the tendency of the immune system toward Th1 responses and is associated with protection from asthma. Additionally, iNKT cell antigenic activity may be a marker of houses with increased microbial exposures and therefore also with protection from asthma.

Database: Medline

2. Socioeconomic deprivation, mortality and health of within-city migrants: a population cohort study.

Author(s): Maheswaran, Ravi; Strong, Mark; Clifford, Phil; Brewins, Louise

Source: Journal of epidemiology and community health; Feb 2018

Publication Date: Feb 2018

Publication Type(s): Journal Article

PubMedID: 29434024

Available at Journal of epidemiology and community health - from BMJ Journals - NHS

Available at Journal of epidemiology and community health - from BMJ Journals

Abstract:BACKGROUNDEvidence linking selective migration (the situation where people in good health move from deprived to affluent areas, whilst people in poor health move in the opposite direction) within local areas to mortality is inconclusive.METHODSMortality in within-city migrants was examined using a Sheffield population cohort, adjusted for moves to care homes. The cohort

comprised 310 894 people aged 25+ years in 2001 followed up for 9.18 years, with 42 252 (13.6%) deaths. Information on pre-existing medical conditions, socioeconomic indicators and smoking was available from a sample survey.RESULTSRelative risks (95% CI) of mortality in migrants from deprived to affluent areas were lower compared with people remaining in deprived areas; 0.53 (0.42 to 0.65), 0.70 (0.61 to 0.80), 0.76 (0.68 to 0.86), 0.93 (0.88 to 1.00) and 0.98 (0.93 to 1.03) in the 25-44, 45-64, 65-74, 75-84 and 85+ year age bands, respectively. They also had lower prevalence ORs (95% CI) for bronchitis (0.59 (0.39 to 0.89)), asthma (0.70 (0.53 to 0.93)), depression (0.59 (0.38 to 0.94)), and were less likely to receive benefits (0.60 (0.47 to 0.76)) and less likely to smoke (0.66 (0.51 to 0.85)).Conversely, mortality relative risks in migrants from affluent to deprived areas were higher compared with people remaining in affluent areas; 1.71 (1.37 to 2.12), 1.59 (1.40 to 1.82), 1.44 (1.26 to 1.63), 1.18 (1.10 to 1.27) and 1.04 (1.00 to 1.09) in the corresponding age groups. They also had higher prevalence odds ratios for long-term illness (2.37 (1.71 to 3.29)), asthma (1.71 (1.25 to 2.35)), diabetes (3.03 (1.70 to 5.41)), depression (2.71 (1.74 to 4.21)), were more likely to receive benefits (2.25 (1.65 to 3.07)) and more likely to smoke (1.51 (1.12 to 2.05)).CONCLUSIONSPeople moving from deprived to affluent areas had lower mortality and better health, and vice versa, especially in the younger age groups. This study provides strong evidence linking selective migration within local areas to mortality.

Database: Medline

NICE National Institute for Health and Care Excellence

Searched but nothing relevant to add

Cochrane Library

Searched but nothing relevant to add

UpToDate®

OpenAthens login required. Register here: https://openathens.nice.org.uk/

ALLERGY, IMMUNOLOGY, AND RHEUMATOLOGY

Peanut oral immunotherapy in children and young adults (February 2018)

Peanut allergy is rarely outgrown, which has led to evaluation of several therapies to cure patients or at least temporarily desensitize them. In a multicenter, randomized trial including 55 subjects aged 4 to 26 years with peanut allergy confirmed by double blind placebo-controlled food challenge (DBPCFC), 79 percent of those receiving maintenance oral immunotherapy (OIT) for at least two weeks passed a DBPCFC (minimal to no symptoms), compared with only 19 percent of those receiving placebo [24]. The remaining 21 percent in

the peanut OIT group withdrew due to adverse events, primarily gastrointestinal symptoms. Although OIT remains investigational, this trial suggests that desensitization to peanut at a level sufficient to protect against small accidental exposures is possible in both children and young adults. (See "Investigational therapies for food allergy: Oral immunotherapy", section on 'Peanut'.)

New autoinflammatory syndrome (February 2018)

A20 haploinsufficiency (HA20) is a newly described autosomal dominant autoinflammatory syndrome caused by pathogenic variants in tumor necrosis factor-alpha-induced protein 3 (*TNFAIP3*). In a recent study of the phenotype in the 16 known patients with this genetic diagnosis, all had recurrent, painful oral, genital, and/or gastrointestinal ulcers, whereas other findings were variable [25]. The majority of patients were symptomatic by 10 years of age. Most patients eventually improved on monotherapy or combination therapy with immunosuppressive agents, and a few responded to colchicine alone. (See "Periodic fever syndromes and other autoinflammatory diseases: An overview", section on 'A20 haploinsufficiency'.)

Library Clinic

Stop by and find out more about our services. We will be here to answer any questions you may have!

April 4th: **Foyer, Education Centre** *12.00-14.00*

April 11th: **Foyer, St Michael's Hospital** *12.00-14.00*

May 2nd: **Canteen (Level 9, BRI)** *12.00-14.00*

June 6th: **Terrace (Level 4, Education Centre)** *12.00-14.00*

June 19th: **Welcome Centre, BRI** *10.00-16.00*

July 3rd: **Welcome Centre, BRI** *10.00-16.00*

July 4th: **Canteen (Level 9, BRI)** *12.00-14.00*

August 8th: **Foyer, Education Centre** *12.00-14.00*

August 29th: **Foyer, St Michael's Hospital** *12.00-14.00*

September 5th: **Canteen (Level 9, BRI)** *12.00-14.00*

September 11th: **Welcome Centre, BRI** *10.00-16.00*

October 3rd: **Terrace (Level 4, Education Centre)** *12.00-14.00*

November 7th: **Canteen (Level 9, BRI)** *12.00-14.00*

December 5th: **Foyer, Education Centre** *12.00-14.00*

December 11th: **Welcome Centre, BRI** *10.00-16.00*

Staffed hours: 8am-5pm, Monday to Friday
Swipe-card access: 7am-11pm, seven days a week

Level Five, Education and Research Centre
University Hospitals Bristol