public awareness survey highlight low awareness which need to be tackled in order to drive earlier diagnosis. This will form key messaging in our new national awareness campaign called ChildCancerSmart.

G176 PUBLIC AWARENESS OF CHILDHOOD, TEENAGERS AND YOUNG ADULT CANCER SIGNS AND SYMPTOMS IN GREAT BRITAIN

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Aims To assess public awareness of the risks and symptoms of cancer in children and young adults under 18 in Great Britain and compare them with the published data where 60–94% of adults are aware of their cancer risks and symptoms.

Methods A face-to-face, computer-assisted opinion survey was conducted by Ipsos MORI. The population-based sample included 475 males and 525 females over the age of 18 and 26% have children aged 6–15 in the household. Questions covered perception about cumulative cancer risk (1 in 450 by the age 15 and 1 in 180 by 25), confidence in recognising signs and symptoms, recognition and perceived urgency of 42 classical signs and symptoms.

Results Over half (56%) of the respondents felt the quoted cumulative age-related cancer risks were higher than they expected. Only 32% felt confident to recognise the signs and symptoms of cancer in the age range. On average, respondents identified 14.9 out of the 42 of the classical signs and symptoms. Top ranked symptoms or signs were: 'lump, swelling in pelvis, testicle or breast' (46%), 'blood in urine or stool' 44%, 'changes to moles' 43%, 'lump or swelling in the chest wall or armpits' 41% and 'weight loss' 40%. The least recognised symptoms were early or late puberty (10%), developmental delay in young children under 2 (11%) and slow growth (13%), where 8%, 2% and 6%, respectively, felt that there was no need to discuss them with a doctor. Symptoms where more than 50% of respondents judged them as requiring medical assessment within 48 hours were: seizures/fits, blood in urine or stool, persistent vomiting, persistent fever or night sweats. Abnormal facial movements and persistent abdominal pain were added for assessment within 2 weeks. All but one of the symptoms were selected for assessment by 3 months.

Conclusions We conclude that public awareness of the risks and signs and symptoms of childhood cancer are substantially lower than awareness for adult cancer population in Great Britain. A similar survey will be conducted amongst healthcare professionals to support the development of campaign materials for a public and professional awareness programme.

G177 CISPLATIN-INDUCED OTOTOXICITY IN PAEDIATRIC AND ADOLESCENT OSTEOSARCOMA PATIENTS REMAINS A CHALLENGE

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Background/Objectives Cisplatin-induced ototoxicity is a well-recognised complication of cancer treatment, resulting in non-reversible, often progressive hearing loss.

Risk factors for cisplatin-induced hearing loss include higher cumulative cisplatin dose, younger patient age, head/neck radiotherapy and concomitant use of aminoglycosides. Osteosarcoma typically affects long-bones in later childhood and adolescence; radiotherapy has a limited role and local protocols prohibit routine use of aminoglycosides. We examined whether cisplatin-induced ototoxicity remained a significant side-effect in this lower risk patient group in a retrospective cohort of patients treated as per the EURAMOS-1 protocol (cumulative cisplatin dose 480 mg/m²).

Methods Paediatric and adolescent osteosarcoma patients at a single UK tertiary centre over a five-year period (2013 – 2017) were included. Clinical information and results of pure-tone audiograms were extracted from patient records. Common Terminology Criteria for Adverse Events version 5 definitions were used to describe ototoxicity; extended high frequency hearing loss (EHFHL) was defined as range > 8KHz.

Results We identified 72 eligible patients with mean age of 12.9 years (median 16 years, range 2 – 18 years) and equal gender distribution. 3 patients progressed/relapsed prior to cycle 4 and a further 3 progressed/relapsed prior to their end of treatment assessment. Baseline audiometry was recorded in 59 patients (82%).

Of 53 patients who had audiometry before their 4th cycle of cisplatin; EHFHL was seen in 13 (25%), 6 (11%) had Grade 1 and 7 (13%) had Grade 2 hearing loss. 37 patients underwent an end of treatment (EOT) audiogram; 13 (35%) had some degree of hearing loss and 5 (13%) had grade ≥ 3. Of the patients with demonstrated hearing loss after three cycles of cisplatin, who had an EOT assessment, 6 demonstrated worsening audiometry.

Conclusion The finding that over half the patients in this lower risk cohort experienced some degree of hearing loss at end of treatment illustrates that ototoxicity remains a significant complication of cisplatin treatment and highlights the importance of rigorous audiometry throughout and following EOT. Since cisplatin has a central role in osteosarcoma prompt recognition of ototoxicity and early institution of support measures is essential and, ultimately, management options to minimise risk of ototoxicity are urgently needed.

G178 LOW-LEVEL LASER THERAPY FOR CHILDREN AND YOUNG PEOPLE UNDERGOING TREATMENT FOR CANCER

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Aim To assess the efficacy and tolerance/safety of oral low-level laser therapy to prevent or treat oral mucositis in children and young people undergoing chemotherapy.

Introduction Inflammation and ulceration of the oral cavity – known as oral mucositis – can affect up to 80% of children and young people (CYP) undergoing chemotherapy. It can lead to severe oral pain as well as difficulty talking, eating and drinking; it may also lead to treatment cessation.

CYP and parents were consulted about their experiences of oral mucositis, and potential future treatment options, through NIHR-funded patient involvement activities, and low-level laser therapy (LLLT) was identified as an approach warranting further exploration.

LLLT is a NICE-recommended treatment option for oral mucositis, based mainly on research in adults. It is not currently used for CYP in England or Wales. We determined to conduct an updated systematic review evaluating the evidence for the efficacy and tolerance/safety of LLLT in CYP undergoing treatment for cancer.

Methods Standard systematic review methods were used (protocol registration: PROSPERO CRD42018099772). Two reviewers systematically searched medical databases, contacted authors and reviewed study references. Studies had to include patients with a diagnosis of cancer; use LLLT prophylactically or as a treatment; and, for assessing efficacy, include CYP less than 18 years old, and be a randomised control trial. For the safety/tolerability analysis, all study types and ages were included.

Results 3390 results for initial screening were identified, with 115 full texts assessed for efficacy, and 159 for safety. LLLT is generally well tolerated, and may be effective at treating oral mucositis, but there is uncertainty around the optimal protocol due to the heterogeneity of results. Different protocols were used, adopting various frequencies, dose, timings and wavelengths of LLLT.

Conclusion CYP must not be left behind when new evidence and treatment options become available for adults.

LLLT has many ways of administration, and further research is needed to assess the efficacy and appropriate use in CYP.

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G179(P) EMERGENCY MANAGEMENT OF ACUTE PAINFUL CRISIS IN PAEDIATRIC SICKLE CELL PATIENTS; INVESTIGATING ANALGESIC TREATMENT DELAYS AT A DISTRICT GENERAL HOSPITAL

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Aims To evaluate the initial management of sickle cell (SC) patients presenting to our Paediatric Assessment Unit (PAU) with vaso-occlusive crisis (VOC), with focus on time to first dose of analgesia.

Methods Retrospective review of data extracted from electronic medical records for VOC cases presenting to our PAU between July 2016 to July 2019. Multi-linear logistic regression analysis was performed to investigate the effect of various parameters on times to analgesia.

Results A total of 95 VOC cases from 52 unique patients were analyzed. Demographics and clinical characteristics are demonstrated in table 1. Time to analgesia was over the 30-minute standard in 63% of cases. The mean time from arrival to administration of analgesia was 54 minutes and from prescription to administration was 11 minutes. For the majority of patients (89.5%), initial analgesia included a fast-acting opiate (intranasal diamorphine or fentanyl lozenges). Receiving

Abstract G179(P) Table 1

Age	
Range	2–16 years
Mean	9.6 years
Gender	
Female (%)	50 (53%)
Genotype	
HbSS	85 (89.5%)
HbSC	5 (5.3%)
HbS/beta Thalassaemia	5 (5.3%)
Mode of arrival	
Car	77 (81.1%)
Ambulance	18 (18.9%)
Time of presentation	
In hours (9am–5pm)	37 (38.9%)
Out of hours (5pm–9am)	58 (61.1%)
Pain score on presentation	
Mild (0–3)	2 (2.1%)
Moderate (4–6)	24 (25.3%)
Severe (7–10)	69 (72.6%)

analgesia within 30 minutes of arrival was significantly associated with high pain score on presentation ($p=0.06$). There was no significant association with mode of arrival ($p=0.47$), time of presentation ($p=0.7$) or the use of an integrated care pathway tool ($p=0.13$). Although age overall did not have a significant effect ($p=0.36$), subgroup analysis showed that the 12–16 years age group was more likely to receive analgesia late ($p=0.04$).

Conclusions Door-to-analgesia times were often prolonged for paediatric SC patients presenting with VOC. High pain score on arrival was linked with shorter times to analgesia, but most other parameters examined did not significantly affect times to analgesia. Targeted quality improvement projects for timely emergency pain management in paediatric SC patients are needed, with particular emphasis on the 12–16 years age group, as it appears to be particularly susceptible to analgesic treatment delays.

G180(P) EXPLORING EQUITY, PATIENT EXPERIENCE AND ENGAGEMENT IN PAEDIATRIC SICKLE CELL DISEASE (SCD): A QUALITY IMPROVEMENT PROJECT

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Aims

- To evaluate paediatric SCD patient experiences of outpatient, inpatient and emergency services at a district general hospital
- To understand the factors contributing to a 20% rate of missed clinic appointments for SCD
- To implement changes to paediatric SCD services that improve outpatient clinic attendance and patient experiences

Methods Primary data were collected from June 2018 to August 2019, through the following:

- Semi-structured questionnaire with patients and carers