aim of treating hypotension is to preserve adequate end-organ perfusion and to avoid low cerebral blood flow which in premature infants can be associated with Intra-Ventricular Haemorrhage, Periventricular Leukomalacia and ultimately adverse neuro-developmental outcomes. The objective of this study, was to determine the pattern of inotrope and vasopressor use at a tertiary care Neonatal Intensive Care Unit (NICU) over a ten-year period from 2008 to 2017.

Methods We conducted a retrospective cross-sectional study over a ten-year period. The data gathered included the number of vials of dopamine, dobutamine, adrenaline, noradrenaline and hydrocortisone registered by the Pharmacy department to the NICU. From these figures, we extrapolated the pattern of pressor usage. We also reviewed the pattern of surfactant and antenatal steroid administration.

Results This study highlights that dopamine remains the first-line agent, regardless of the clinical scenario. Dobutamine is less commonly used, but figures remain high. An increase in endogenous catecholamine usage in 2013–2015 is apparent, with the administration of hydrocortisone tapering off in recent years. Rates of surfactant administration have decreased since 2013, coinciding with an ongoing upward trend in antenatal steroid administration to women up to 33 completed weeks of gestation

Discussion Low systemic blood flow is commonly encountered in extremely premature infants. Despite this, it remains unclear what the safest and most effective drug is to prevent and manage hypotension. Few controlled trials have directly compared the individual agents and the effects that these drugs have on any meaningful outcome. As such, the database with the highest level of medical evidence, the Cochrane Library has come to few solid clinical recommendations.

Conclusion Despite the ongoing upward trend in admissions to NICU, inotrope and vasopressor use is falling. We hypothesise that this reflects an overall improvement in the management of newborns, as pressor agents act as a surrogate marker of a baby's underlying condition. Through the judicious use of antenatal steroids, greater attention to initial resuscitation, early initiation of CPAP and early extubation, survival rates are improving, incidence of Cystic PVL is falling and overall morbidity is down

P488 SURVIVAL OF PAEDIATRIC AND ADOLESCENT/YOUNG ADULT (AYA) CANCER PATIENTS WITH SARCOMA IN IRELAND DURING 1994–2014: COMPARISONS BY AGE

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Some studies indicate that survival of AYAs with cancer may be inferior to that of younger children with similar cancers, possibly related (in part) to differences in access to centralised or standardised treatments. We sought to examine the comparative survival of paediatric & AYA patients in Ireland across a 20-year period.

Methods Using the National Cancer Registry Ireland (NCRI) database, all patients diagnosed with a sarcoma age 0–24 between 1994–2014 were identified. Survival was based on

matching of cases against national death certificate data complete up to 31 December 2014 & grouped in 2 diagnostic cohorts: 1994–2003 and 2004–2014 and examined according to the ICCC.

Results 577 patients less than 25 years were diagnosed with a sarcoma between 1994–2014; 321 under 15. Significantly poorer survival was noted for the AYA patients compared with paediatric patients for the following sarcoma groups and diagnosis periods

- Malignant bone tumours, 1994–2013 (EHR 1.62, 1.05–2.48, P=0.026) and 1994–2003 (EHR 1.87, 1.05–3.33, P=0.032);
- Ewing & related tumours), 1994–2013 (EHR 2.04, 95% CI 1.11–3.72, P=0.021) and 1994–2003 (EHR 2.68, 95% CI 1.22–5.87, P=0.014);
- Soft tissue sarcomas), 1994–2013 (EHR 2.14, 1.29–3.53, P=0.03) and 2004–2013 (EHR 2.52, 1.20–5.25, P=0.014).

Conclusions This study highlights the disparities that exist in outcomes for AYA patients with sarcomas treated in Ireland. The exact cause for this is unclear and is likely multifactorial, possibly owing to lack of standardised/centralised services. Future development on a national level is imperative.

P489

CANCER PREDISPOSITION SCREENING IN CHILDREN WITH CANCER IN IRELAND

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Background Presently, 8–10% of children and adolescents diagnosed with cancer have an underlying cancer predisposition syndrome, however the true figure may be higher. Family history alone identifies <4% of such patients and is therefore not sufficient in isolation as de novo mutations also occur. It is important to identify patients with cancer predisposition syndromes to guide further screening and tailor long term follow up and surveillance programmes. In addition, such information may help counsel family members on cancer risk. At present we believe we are under-referring patients for genetic cancer predisposition testing. The Royal Marsden Hospital is piloting a new system of identifying childhood and adolescent cancer patients for genetic screening.

Aim To document how many patients at Our Lady's Children's Hospital, Crumlin, relevant to their specific cancer diagnosis, may benefit from genetic referral to identify those who may have an underlying cancer predisposition syndrome

Methods Retrospective review of all patients diagnosed with cancer in OLCHC between 01/01/2017 – 31/12/17.

Using the Royal Marsden Hospital 'Stop-light' system relative to the patient's diagnosis, patients who have a diagnosis labelled as:

1. Red - automatically eligible for genetic referral
2. Yellow – may benefit from referral
3. Green – do not require referral

Results There were 160 patients diagnosed in the period 01/01/2017 – 31/12/2017. Of these, 6 were excluded because of a pre-cancerous, rather than cancer, diagnosis: aplastic

anaemia, transient abnormal myelopoiesis, post-transplant lymphoproliferative disorder and Fanconi anaemia. Of the remaining 154 patients diagnosed with cancer, 88 (57.1%) were classified as 'green' according to the Royal Marsden Hospital 'Stop-light' system. 48 (31.2%) were classified as 'orange' and 18 (11.7%) were classified as red, qualifying for automatic referral to clinical genetics.

Conclusions A significant proportion of patients diagnosed with cancer in OLCHC may benefit from referral to clinical genetics and screening for underlying cancer predisposition syndromes.

P490 INCIDENCE AND 5 YEARS SURVIVAL RATES OF CHILDHOOD CANCER DIAGNOSED LESS THAN 1 YEAR OLD IN IRELAND 2007–2017

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Introduction Childhood cancer is the second commonest cause of death in children in developed countries. Childhood cancer survival rates has improved over the last decade with the advancement of diagnostic procedures and continuous improvement of multimodal treatment strategies. According to the National Cancer Registry of Ireland, an average of 137 cancers were diagnosed per year in children under the age of 15 between 1994 and 2014. The 5-year overall survival rate for this entire cohort was 81%. It is well documented that survival rates in paediatric oncology vary depending on specific cancer diagnosis, age of the patient at diagnosis and disease stage.

Aim We describe the incidence of cancer in very young children and the influence of age on outcome in children diagnosed with cancer in Ireland under the age of 1 between 2007–2017.

Method Data were extracted from the database of the National Children's Cancer Service (NCCS) based at Our Lady's Children's Hospital, Dublin. The data presented refer to the International Classification of Childhood Cancer (ICCC) version 3 with the inclusion of Langerhans Cell Histiocytosis (LCH).

Result 185 patients were diagnosed with paediatric cancer under the age of 1 at the time of their initial diagnosis. 159 (85.5%) patients were diagnosed with solid tumours or LCH. 86 (46.5%) were male. The average age at diagnosis was 5.24 (range 0–12) months. 19 (10.3%) patients were diagnosed following an abnormal antenatal scan. The most common cancers diagnosed were neuroblastoma (22.7%), CNS tumours (19.5%) and leukaemia (13.5%).

158 (85.5%) patients received treatment. 124 (78.4%) patients received chemotherapy as part of their treatment. 20 (12.7%) patients received radiotherapy. The mean age for radiotherapy was 1.35 years (range 0.17–4). 18 (9.7%) patients received stem cell transplant/rescue. The cumulative overall survival rate at 5 years is 80%. CNS tumours have the worst prognosis followed by leukaemias. 35 (18.9%) patients have relapsed during follow up, and 20 are alive in follow-up.

Conclusion Incidence rates of specific paediatric cancer types vary according to the age at diagnosis. There is no difference in survival rates between children diagnosed with cancer under 1 year of age and older children. Outcomes at the NCCS compare favourably with international standards.

P491 A RARE PLEURAL BASED MALIGNANCY IN CHILDHOOD

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Introduction Malignant Mesothelioma (MM) is a rare invasive neoplasm arising from the mesothelial lining of several organs, primarily the pleura and peritoneum¹. A causal relationship with asbestos exposure is well established, however; MM can occur in the absence of well-defined risk factors and at an earlier age².

Case Presentation A 15 year old boy, presented to the Emergency Department with a 6-week history of cough, 5 kilogram weight loss and right sided pleuritic chest pain. He had attended the ED 4 weeks prior to this with chest pain, cough, temperature and a chest infection was diagnosed. Repeat chest x-ray demonstrated a right lower lobe consolidation with obscuration of the hemidiaphragm and a suspected pleural based opacification. Laboratory investigations showed a hypochromic microcytic anaemia, hyponatremia and raised inflammatory markers. A CT of thorax, abdomen and pelvis showed lobulated rind of pleural based soft tissue densities in the right thorax with downward invasion through the hemidiaphragm into the liver. On transfer to a tertiary Paediatric Oncology centre, A CT-guided biopsy demonstrated a malignant epithelioid neoplasm confirming a diagnosis of malignant mesothelioma with EWSR1-ATF1 rearrangement. He was treated with 2 cycles of Pemetrexed and Cisplatin Chemotherapy (NCCP guideline). Follow up imaging demonstrated disease progression which coincided with clinical deterioration. NG feeding, PleuralX drain and Oxygen therapy are part of his treatment regimen. Vinorelbine monotherapy was commenced and a Palliative approach has been adopted. Currently he is stable awaiting further imaging.

Discussion MM is rare in young people. The genetic susceptibility to MM is complex and recently an EWSR1-ATF1 fusion transcript has been described in 4 younger patients without prior asbestos exposure². The prognosis in MM is poor but improved survival in younger patients has been observed¹. We wish to highlight this case because it is rarely encountered in a paediatric setting.

P492 ELECTROCLINICAL FEATURES AND SEIZURE OUTCOME OF PEADiatric PATIENTS WITH IMMUNE MEDIATED ENCEPHALOPATHY

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Purpose Most patients with immune mediated encephalitis (IME) suffer from seizures, but data on the seizure outcomes in the paediatric population remains limited. This study was conducted to assess the clinical course and electroclinical features of paediatric populations diagnosed with seizures associated with IME.

Methods Total 15 patients with IME were identified from Cerrahpaşa Medical Faculty Paediatric Neurology Department and Intensive Care Unit from 2014 to 2018. The demographic, clinical and electrographical data of participants were recorded. Symptoms were classified as psychiatric, seizure, flu-