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The 3rd Annual Scientific Meeting of the Malaysian Division of the International Academy of Pathology was held at G Hotel, Penang, Malaysia on 8-9 October 2016. Abstracts of poster presentations are as follows:

P1. Detection and validation of human papillomavirus in formalin fixed paraffin-embedded cervical tissue using immunohistochemistry and real-time PCR

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Introduction: About 90% of cervical cancer is caused by Human Papillomavirus (HPV) infection. The objective of this study was to determine and compare the presence of HPV in formalin fixed paraffin-embedded (FFPE) tissue of normal, precancerous and cancerous lesions of the cervix by immunohistochemistry (IHC) and real-time PCR (RT-PCR). ***Methods:*** A total of 19 cases including 5 normal, 4 low-grade cervical intraepithelial lesions (CIN I), 4 high-grade CIN (CIN II and III) and 6 squamous cell carcinoma (SCC) were randomly selected from pathology records. FFPE tissue sections were subjected to HPV detection by IHC using antibodies against p16INK4a, a surrogate marker for E7 expression, (CDKN2A monoclonal antibody, Abnova) and HPV 16/18 E6 protein (monoclonal antibody [C1P5], Abcam). Immunostained slides were evaluated under light microscopy as positive or negative staining. RNA was extracted from FFPE tissue sections using NORGEN BIOTEK FFPE RNA extraction kit and then converted to cDNA by ABI Reverse transcriptase kit. All samples were validated for the presence of HPV by TaqMan based RT-PCR method targeting E7 oncoprotein of HPV 16 and HPV 18. ***Results:*** Immunohistochemistry results showed 2/5 normal, 4/4 low grade CIN, 4/4 high grade CIN and 6/6 SCC cases were positive for HPV 16/18 E6 protein. All 19 cases showed positive staining in the basal cells of cervical epithelium for p16 protein. In RT-PCR, all samples which were IHC positive for HPV16/18 E6 protein proved to be positive. There was 100% concordance between HPV16/18 E6 protein expression and HPV 16/18 E7 gene expression. However, p16 IHC proved to be less specific. Three normal cases were IHC positive but RT-PCR negative. p16 expression appears to be up-regulated in proliferative cells. ***Conclusions:*** Immunohistochemical detection of high-risk HPV is more accurate using HPV16/18 E6 antibody compared to p16INK4a antibody, which may lead to false positive results. Clinicians should be aware that histologically normal cervix may harbour HPV infection.

P2. Perianal ulcer as a rare presentation of Langerhans cell histiocytosis: a case report

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Introduction: Langerhans cell histiocytosis (LCH) is a group of idiopathic disorders characterized by the presence of cells with characteristics similar to bone marrow–derived Langerhans cells juxtaposed against a backdrop of hematopoietic cells, including T-cells, macrophages, and eosinophils. ***Clinical case:*** A 52-year-old Chinese man presented with perianal ulcer. The ulcer was painful and slowly increasing in size for the last 2 years. Further laboratory work-up revealed he had hypernatremia and hypothyroidism, with 3-4L of urine output daily. He was then diagnosed with panhypopituitarism. On magnetic resonance imaging, there was an avidly enhancing extra axial lesion in the hypothalamus. A full body CT scan excluded other organ system involvement. A final diagnosis of Langerhans cell histiocytosis with multisystem disease (central nervous system and skin) was made after correlation of clinical, radiological and pathological findings. ***Pathology findings:*** Biopsy of the perianal ulcer shows epidermal ulceration with underlying dermal edema and granulation tissue replacement with extensive abscess formation. Diffuse sheets of infiltrative atypical Langerhans cells are seen, characterised by abundant clear to pale eosinophilic cytoplasm, with large vesicular folded, lobulated or reniform nuclei, intranuclear grooves and inconspicuous nucleoli. Small clusters of eosinophils are present among these Langerhans cells. Immunohistochemical study shows the atypical Langerhans cells are negative for CD68 and positive for S100 and CD1a. ***Conclusions:*** Langerhans cell histiocytosis should be included as one of the differential diagnosis in patient presented with chronic perianal ulcer. Patient diagnosed with LCH should then be screened and followed up for other organ system involvement, with early commencement of the appropriate local treatment or systemic chemotherapy.

P3. Primary mucosal melanoma of the sinonasal: a clinico-histological pitfall

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Introduction: Primary sinonasal mucosal melanoma (MM) is a rare subtype of melanomas, accounting for less than 1% of all melanomas and <5% of all sinonasal tract neoplasm. It poses a significant diagnostic challenge for the clinicians due to lack of early and specific clinical features. Similarly, it presents a diagnostic dilemma for pathologists especially when it is amelanotic, as it can show many histologic mimics that immunohistochemical and molecular studies are required to confirm the diagnosis. We report such a case of MM in the nasal cavity. ***Clinical case:*** A 50-year-old male presented with persistent left nasal blockage associated with epistaxis for 4 months. Naso-endoscopic examination revealed a fleshy and friable lobulated mass occupying the left nasal cavity, which extended posteriorly till the posterior nasal septum and nasopharynx. Computed Tomography (CT) of paranasal sinuses showed a heterogeneously enhancing lobulated mass occupying the expanded left nasal cavity. ***Pathological findings:*** The tumour is composed of small round blue cells arranged in solid sheets with areas of angiocentric pattern. The malignant cells display round hyperchromatic nuclei with some showing prominent nucleoli and clear to eosinophilic cytoplasm. No melanin pigment is observed. The tumour cells are immunoreactive for S100 protein and focally positive for HMB-45 and Melan A. ***Conclusions:*** The tumour is concluded as a primary sinonasal MM due to absence of previous or concurrent pigmented lesions elsewhere. Clinically, the presentation is rather non-specific; histologically, it mimics undifferentiated small blue cell tumour of the sinonasal tract. This case reminds us that melanoma is truly a great mimicker, clinically and histologically.

P4. Lymphoepithelial carcinoma of submandibular gland in a young malay female patient

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Introduction: Lymphoepithelial carcinoma (LEC) of the salivary gland is very rare, accounting for less than 1% of all salivary gland neoplasm. It occurs predominantly in the parotid gland and strikingly in the Epstein-Barr virus (EBV) endemic geographical areas with unique ethnic distribution, especially among the Inuits in the Arctic regions, south-eastern Chinese and Japanese. We report a case of LEC in the submandibular gland in a young Malay female patient. ***Clinical case:*** A 26-year-old Malay lady presented with a 4-year history of painless submandibular mass. Contrast enchanced computed tomography (CECT) showed a heterogeneously enhancing right submandibular gland and multiple enlarged lymph nodes at right level I, II, III, and IV. Excision of the right submandibular gland, right modified radical neck dissection and nasopharygeal biopsy were performed. The patient subsequently underwent adjuvant concurrent chemoradiation therapy. No recurrence was documented one year post surgery. ***Pathological findings:*** Histopathological examination reveals LEC of the submandibular gland. This tumour is composed of sheets and lobules of spindle-polygonal cells with prominent non-neoplastic lymphoid stroma. The tumour cells are positive for EBER- ISH, CK5/6, Pan-Cytokeratin and EMA. There are multiple metastatic lymph nodes at right neck level II, III and IV. Nasopharynx biopsy is negative for malignancy. ***Conclusions:*** LEC is histologically indistinguishable from metastatic nasopharyngeal carcinoma in a salivary gland. Careful clinical evaluation is necessary and biopsy of the nasopharynx is absolutely vital to rule out nasopharyngeal carcinoma. A 5-year survival rate of 75-86% has been reported in patients treated by combined surgery and radiation therapy.

P5. Mature teratoma with gliomatosis peritonei

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Introduction: Gliomatosis peritonei (GP) is the metastatic implantation of mature glial tissue within the peritoneal cavity of patients with ovarian teratomas. GP is often associated with immature teratoma, but it also can occur in mature teratoma. It is a benign condition and its presence is believed to suggest a more favourable prognosis in cases of high-grade ovarian teratoma. ***Clinical Case:*** A 24-year old woman presented with a 2-month history of abdominal distension associated with constitutional symptoms. A huge ovarian mass with solid area and loculation measuring 25cm x 16 cm x 18 cm was found on ultrasonography. Computed tomography revealed a huge solid cystic mass occupying the whole abdominal cavity pushing the other abdominal organs to the periphery, measuring 16.5cm x 24.9cm x 32.3cm with well-defined margin and clear plane from surrounding

structure. The solid component attached to the right adnexal region showed fatty component and calcification. A staging laparotomy was performed and a huge right dermoid cyst measuring 30cm x 30cm was removed. Multiple nodules over the omentum and peritoneal cavity were noted, thus omentectomy, peritoneal biopsy and right lymph node sampling were done. ***Pathological findings:*** Sectioning of the ovary shows a multi-loculated cyst containing cheesy sebaceous material mixed with hair and bone. The wall thickness ranges from 2mm to 15mm. No solid area is seen. Histopathologic examination reveals an ovarian cyst generally lined by keratinized stratified squamous epithelium. Skin appendages and glial tissue are predominantly seen within the cyst wall. Scattered areas of respiratory tissue with foci of foreign-body granulomas reacting towards keratin material and hair are present. Extensive sampling of the specimen shows absence of immature component. Both omentum and peritoneum show nodules exclusively composed of mature glial and neuronal tissue, accompanied by fibrosis and chronic inflammation. No immature component is seen. The pelvic lymph node is unremarkable. ***Conclusions:*** This case study highlights the importance of extensive sampling of ovarian teratomas with gliomatosis peritonei to exclude presence of immature elements, which may imply a poor prognosis and require aggressive therapy.

P6. Lymphoplasmacytic infiltrate in invasive breast carcinoma – correlation with pathological parameters and HER2/neu expression

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Introduction: Breast cancer is the most common cancer in West Sumatera, Indonesia. Even with better therapeutic modalities, the survival rate remains low. Lymphoplasmacytic infiltrate is one of the features present around tumor cells but its role is still controversial. This study aims to identify the levels of lymphoplasmacytic infiltrate in invasive breast carcinoma and analyze its correlation with pathological parameters and HER2/neu expression. ***Methods:*** Thirty-five cases of invasive breast carcinoma diagnosed in anatomical pathology laboratories in West Sumatera, from 2010 – 2013 were included in this study. H&E-stained slides were reviewed to assess histopathological subtypes, histological grade, presence of lymphovascular invasion (LVI), and levels of lymphoplasmacytic infiltrate. HER2/neu expression was determined immunohistochemically. Correlation between pathological parameters and levels of lymphoplasmacytic infiltrate were analyzed. ***Results:*** All cases are women with ages ranging from 34 to 70 years. The most common histopathological subtype is invasive carcinoma of no special type. Majority of the cases are grade 2 tumors. 77.1% cases show presence of LVI; 40% are positive for HER2/neu expression. The levels of lymphoplasmacytic infiltrate are determined as mild (37.1%), moderate (48.6%), and severe (14.3%). There are significant correlations between lymphoplasmacytic infiltrate and histopathological subtypes, histological grade and LVI; however lymphoplasmacytic infiltrate does not correlate with HER2/neu expression. ***Conclusions:*** Levels of lymphoplasmacytic infiltrate have significant correlation with histopathological subtypes, histological grade and LVI but not HER2/neu expression. The study results imply that lymphoplasmacytic infiltrate might play a role in cancer progression; further study is needed to establish lymphoplasmacytic infiltrate as a prognostic indicator.

P7. Recurrent malignant extra gastrointestinal stromal tumor with high Ki-67 index: a case report

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Introduction: Extra-gastrointestinal stromal tumor (Extra-GIST) is a rare mesenchymal neoplasm of mesentery, omentum or peritoneum. Histopathological and immunohistochemical features of extra-GIST are identical to classic GIST but this tumor has a higher malignant potential. Prognostic factors such as tumor diameter could not be applied for extra-GIST because majority of tumors have huge size; however, mitotic count and Ki-67 index have a role as prognostic factors. ***Clinical Case:*** A 31-year-old woman presented with abdominal swelling for 2 months. On examination, a tender abdominal mass associated with ascites was noted at the left upper-quadrant of abdomen. A computerised tomography (CT) scan revealed multiple masses in the ovaries, liver, peritoneum, omentum and anterior midline of the abdominal wall. Two years prior to this presentation, she had been suffering from malignant extra-GIST with lymph nodes metastases, which had been histologically confirmed with positive CD117 immunostaining. Imatinib was previously administered as adjuvant therapy for 1 year. Tumor debulking surgery was performed for the current presentation under impression of recurrent malignant extra-GIST with metastases to ovary and liver. The patient however succumbed to death after surgery. ***Pathological Findings:*** Histopathological examination of the tumor removed 2 years ago shows malignant extra-GIST with lymph node metastases and positive CD 117 immunostaining. The recurrent tumor mass also shows features of malignant extra-GIST with ovarian metastases. The tumor also demonstrates a high Ki-67 index (7.5%). ***Conclusions:*** Malignant potential and possibility of recurrence of extra-GIST could be predicted by clinicohistopathological parameters such as mitotic count and Ki-67 index. As mitotic count has a higher inter-observer variability, Ki-67 index could be utilized to gauge the malignant potential. Malignant extra-GIST in this case shows a high Ki-67 index, which could be related to tumor recurrence and metastases despite adjuvant therapy.

P8. Synchronous carcinomas of colon and ovary: a case report

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Introduction: Synchronous colorectal adenocarcinoma and ovarian endometrioid adenocarcinoma is uncommon. Here, we report such synchronous tumours occurred in a middle-aged lady. ***Clinical case:*** A 47-year-old lady with a past history of thyroidectomy presented with fresh per rectal bleeding. Examination revealed a right ovarian mass and a circumferential rectosigmoid mass located at 18 cm from the anal verge. Anterior resection and hysterectomy with bilateral salphingo-ophorectomy were performed. Intraoperative findings showed a tumour at rectosigmoid junction associated with peritoneal nodules and gross ascites. The right ovarian solid cystic mass showed capsular breach. ***Pathological findings:*** The rectosigmoid specimen shows a firm, fungating tumour (40x20x15mm) from the colonic mucosa infiltrating up to the serosa with multiple tumour deposits in the mesenteric fat. The right ovarian mass (60x45x30mm) shows solid cystic areas with capsular breach. The posterior outer surface of the uterus appears irregular and greyish. Histologically, the rectosigmoid tumour is a moderately differentiated adenocarcinoma of colonic in origin. The malignant cells are strong positive for CK20, CDX2 and CEA, focal positive for CK7 and negative for ER and PAX8. Tumour cells at the outer surface of the uterus are colonic in origin with similar immunoprofile: positive for CK20, CDX2 and CEA, and negative for CK7, ER and PAX8. On the other hand, the ovarian mass shows features of endometrioid adenocarcinoma; the malignant cells form irregular complex glands with cribriform, and villoglandular configuration and areas of solid growth pattern (FIGO architectural grade 2). In contrast, the malignant cells in the ovarian mass are positive for CK7, ER and PAX8, and negative for CK20, CDX2 and CEA. ***Conclusions:*** Accurate diagnosis of two primary malignancies is crucial for appropriate therapeutic decisions. Immunohistochemistry stains are helpful in equivocal cases.

P9. CD24 and CD133 expression in colorectal adenocarcinoma

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Introduction: Colorectal cancer (CRC) is the third most common cancer worldwide and the second leading cancer in Malaysia. Despite many advanced therapies, many cases of recurrence and resistance have been reported. Recently, cancer stem cells (CSCs) have been a central target in cancer research and targeted therapy. CSCs express various surface markers including CD24 and CD133. Development of specific therapies targeted at CSCs holds hope for improvement of survival and quality of life of CRC patients. The objective of this study is to determine the expression of CSC markers in CRCs and lymph node metastases. The expressions were compared with the benign and normal colonic tissues. ***Methods:*** 284 formalin fixed paraffin-embedded (FFPE) colorectal cases were retrieved from Department of Pathology, Hospital Kuala Lumpur. The cases were composed of adenocarcinomas (n=176), lymph node metastases (n=86) and adenomas (n=22). Immunohistochemical staining was performed to analyse CD24 and CD133 expressions. The expressions were scored using HSCORE. ***Results:*** CD24 was strongly expressed in 49.4% of CRCs, 47.7% of lymph node metastases, 40.9% of adenomas and 8% of normal colonic tissues. CD133 was strongly expressed in 47.7% of CRCs, 50% of lymph node metastases, 50% of adenomas and 9.7% of normal colonic tissues. CD133 expressions of lymph node metastases were associated with tumour location ($p = 0.017$). ***Conclusions:*** The expressions of CD24 and CD133 in adenomas were comparable to CRCs and lymph node metastases. It could imply these markers are involved early in the process of carcinogenesis.

P10. Expression of ErbB family in HCT116, HT29, and Caco-2 colorectal cancer cell lines

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Introduction: Colorectal cancer (CRC) is the second most common malignancy in Malaysia. Recurrence of CRC cancer remains a major issue which affects nearly 50% of patients treated by conventional therapeutics. Therefore, identification of reliable tumour biomarkers for early detection and therapeutic targets is critically important. Aberrant expression and signalling of ErbB family has been implicated in the molecular pathogenesis of CRC. ErbB family, which consists of EGFR (HER1), HER2, HER3 and HER4, plays a vital role in the regulation of cell proliferation, survival, and differentiation. This study aims to determine the expression of ErbB family in CRC cell lines using quantitative polymerase chain reaction (qPCR). ***Methods:***

CRC cell lines (HCT116, HT29, and Caco-2) and normal colon cell line (CCD841) were obtained from ATCC and cultured in appropriate media supplemented with foetal bovine serum and 1% penicillin/streptomycin and under conditions described by ATCC. Total RNA was extracted from all cell lines using the RNeasy Plus Mini Kit and followed by reverse transcription to cDNA. The expression of EGFR, HER2, HER3 and HER4 were analysed using qPCR. Beta-actin was used as reference gene. Gel electrophoresis of the PCR products were carried out using 3% agarose gel. ***Results:*** Total RNA was successfully extracted from CRC cell lines. EGFR, HER2, HER3, and HER4 were upregulated in HCT116, HT29 and Caco-2 as compared to normal cell line. ***Conclusions:*** This study shows that ErbB family is aberrantly expressed in CRC cell lines as compared to normal cell line. This preliminary study is beneficial for further studies in identifying ErbB family as potential CRC biomarkers and therapeutic targets.

P11. A rare presentation of NK/T-cell lymphoma as multiple ulcerative colonic lesions

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Introduction: Extranodal NK/T cell lymphoma is rare, typically involving the upper aerodigestive tract. Even rarer is involvement of other organs such as the skin, testis and intestine presenting as primary or disseminated disease. We describe a case of extranodal NK/T cell lymphoma presenting with colonic ulcerative lesions mimicking colonic Crohn's disease. ***Clinical case:*** A 46-year-old Chinese male with long standing Parkinson's Disease presented with a 6-month history of passing mucus and blood per rectum, along with abdominal discomfort, weight loss and fever. He denied recent overseas travel or tuberculosis contact. Physical examination revealed no organomegaly or lymphadenopathy while routine blood tests showed pancytopaenia. CT scan demonstrated multiple circumferential thickenings predominantly of the right colon. Colonoscopy showed multiple ulcerative lesions involving the ileocolonic region. An emergency extended right hemicolectomy was performed due to profuse tumoral bleed that was non-amenable to embolization therapy. ***Pathological findings:*** The biopsy of ulcerative lesions shows foci of ulcerated colonic mucosa infiltrated by medium to large-sized malignant lymphoid cells displaying hyperchromatic nuclei, inconspicuous nucleoli and scanty cytoplasm. Angiodestruction, angiocentricity and abundant necrotic debris are present. The tumor cells display immunohistochemical positivity for CD3, CD4, CD7 and TIA-1, focal positivity for CD30 and aberrant loss of CD5. They are negative for CD20, CD79α CD8 and CD56. Ki-67 proliferation index is 80%. In situ hybridisation study shows positive Epstein-Barr virus (EBV)-encoded RNA (EBER).The hemicolectomy specimen grossly shows multiple areas with raised mucosa and thickened bowel wall. They have white-tanned cut surface and ulcerated and haemorrhagic mucosal surface that extends deeply into the muscularis propria. Microscopically these areas show similar morphological features as in the biopsy. ***Conclusions:*** Colonic NK/T cell lymphoma is rare and requires a high index of clinical, endoscopic and pathological suspicion. When immunohistochemistry points towards a T-cell lymphoma, the EBV status would be helpful to confirm such a diagnosis. Surgery is rarely indicated, but sometimes may be necessary due to active tumoral bleed. Surgery may also be potentially curative in combination with chemotherapy and radiotherapy. It is imperative to investigate further to exclude other primary sites especially the nasal cavity before concluding this as a primary intestinal lymphoma.

P12. Metastatic malignant mural nodule at a port site following laparoscopic surgery for borderline mucinous ovarian tumour

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Introduction: Mural nodules are rare nodules that occur within cystic tumours of the ovary; they could be benign, borderline or malignant. They are classified as sarcoma-like, anaplastic carcinoma, sarcomatous and mixed nodules. We describe a rare case of malignant mural nodule of carcinosarcoma type occurring at a port site following laparoscopic surgery for borderline mucinous ovarian tumour. ***Clinical case:*** A 28-year-old nulliparous lady had a laparoscopic left cystectomy. The removed ovarian cyst was a borderline mucinous ovarian tumour. Six months post-surgery, a painful swelling was noted at the laparoscopic port site in the left lumbar region. Wide local excision was subsequently performed. ***Pathological findings:*** Macroscopically, the mass is a fungating purplish nodule. Sectioning shows a well-circumscribed lesion measuring 80x80x60mm with haemorrhagic cut surface. Microscopically, it is a nodule located at the dermis and subcutis, composed of spindle cells arranged in fascicles and sheets. They are markedly pleomorphic and immunoreactive towards Vimentin. Focal areas of glandular formation are observed, which are positive for CK7 and CK 5/6. Aberrant mitoses are noted with a high mitotic count of 11 per 10 high power fields. ***Conclusions:*** Mural nodules can be single or multiple; the size ranges from microscopic size up to 10cm. They are usually seen within the ovarian mass, sharply demarcated from the adjacent epithelial tumour component. They may be benign, either reactive or neoplastic, or malignant. Correct classification of these mural nodules is important because of therapeutic implication and prognostic significance. To our best knowledge, malignant mural nodule metastasizes to a laparoscopic port site has yet to be reported.

P13. The 5-year journey of an Iban man with ulcerative colitis: a case report

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Introduction: Ulcerative colitis (UC) is a subset of idiopathic inflammatory intestinal condition, where the pathogenesis is not well understood. With the urbanization of the rural population, the incidence of UC is believed to be increasing. We described here a case of an Iban man with a 5-year history of gastrointestinal symptoms that was finally diagnosed as UC. ***Clinical case:*** Five years ago, a 64-year-old Iban man presented with abdominal discomfort and diarrhoea. Colonoscopy revealed suspicious lesions at the rectosigmoid colon. Biopsies exhibited focal dysplastic changes with abundant mucin, suspicious of a mucin-secreting adenocarcinoma. He had another 2 subsequent colonoscopies and biopsies in the same year, which first showed inflammatory polyps with acute inflammation, and then indeterminate chronic colitis resembling early UC. He refused intervention and defaulted follow-up. Three years later, he presented with intestinal obstruction and bloody diarrhea. CT scan showed rectosigmoid colon mass. Colonoscopy and biopsy showed ulcerations and crypt distortion with hyperplastic changes and active inflammation. He was administered sulfasalazine and recovered. In the subsequent colonoscopy at remission, there were a lot of pseudopolyps. He was admitted again with toxic megacolon and septicemia 9 months after initiation of treatment. Emergency subtotal colectomy was performed, and he had a stormy recovery. Histopathological examination finally confirmed UC. ***Pathological findings:*** Subtotal colectomy specimen showed thick and ulcerative mucosa with extensive and deep fissuring ulceration replaced by fibropurulent exudates and granulation tissue. No granuloma or perforation was seen. The serosa revealed features of acute serositis. Adjacent colonic mucosa showed hyperplastic changes forming pseudopolyps along with reactive nuclear atypia of the epithelial lining. Pseudodiverticuli composed of mucosa and muscularis mucosae invaginating through the muscularis propria without heterotopic gastric or pancreatic tissue were observed. ***Conclusions:*** To confirm UC is not an easy task, especially in the rural areas where tuberculosis is endemic. A high index of suspicion by both clinicians and pathologists is paramount to reach the diagnosis. Improvement in medical services and knowledge may facilitate early diagnosis of UC.

P14. Diffuse large B-cell lymphoma of the small intestine in a refractory coeliac disease

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Introduction: Coeliac disease (CD) is a chronic immune-mediated enteropathy induced by dietary gluten in genetically susceptible individuals. These patients have increased risk of lymphomas. Enteropathy-associated T-cell lymphoma (EATL) was previously thought to be the principal malignancy related to CD, however, recent studies show increased incidence of diffuse large B-cell lymphoma (DLBCL) among CD patients. Here, we report a case of concurrent small intestine DLBCL and CD. ***Clinical case:*** A 54-year-old Caucasian male who presented with weight loss and persistent diarrhoea was diagnosed as CD following enteroscopy and ileal biopsy. His symptoms however persisted after six months of gluten-free diet. Oesophagogastroduodenoscopy was then performed and showed generalised villous atrophy with scalloping of duodenal mucosa. MR enterography showed small bowel thickening at the proximal and mid-jejunum with mesenteric lymphadenopathies, suspicious of EATL. Repeat enteroscopy one month later showed thickened jejunal wall and biopsy confirmed mucosal disease consistent with refractory CD without features of EATL. A few weeks later, he presented with acute abdomen; laparotomy with small bowel resection was performed for a perforated jejunum. ***Pathological findings:*** His first biopsy from the terminal ileum showed severe mucosal flattening of villi with crypt destruction, hence, a diagnosis of CD was made. The second biopsy from duodenum showed severe active duodenitis with blunted villi. Under suspicion for EATL, the third biopsy taken from the jejunum showed villous blunting and flattening, consistent with refractory CD without features of EATL. Subsequently, small bowel resection was performed and gross examination of the perforated jejunum showed thickened wall and a small polypoidal structure. Microscopically, diffuse malignant lymphoid cells comprised of medium to large cells infiltrated the intestinal wall. Immunohistochemical studies showed that the malignant cells were positive towards CD20, CD79α CD10 (weak), and BCL-6 with a high proliferative index (80%). These cells were negative for CD3, CD5, CD7, CD8, TIA-1, MUM 1, cyclin D1, and CD56; these features were consistent with a diagnosis of DLBCL. ***Conclusions:*** Non-responsive CD warrants thorough dietary review and further evaluation to exclude diseases associated with CD such as enteropathy-associated lymphoma or other alternative diagnosis.

P15. TB abdomen: always a dilemma in diagnosis?

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Introduction: Tuberculosis (TB) of the abdominal cavity may be the sole manifestation of extrapulmonary TB infection, causing confusion in diagnosis and delay in treatment, especially when the conventional TB investigations are negative. ***Clinical case:*** A 27-year-old Iban lady presented with chronic abdominal pain, distension and cachexia. She had an infra-umbilical nodule, which resembled a Sister Mary Joseph nodule; a biopsy was performed on this nodule. Tumour markers (Ca15-3 and Ca125) were raised. CT scan reported multiloculated ascites, thickened bowel loops at the ileocaecal region, cocoon of the small bowel loops, and pulmonary embolism of the right pulmonary artery. Differential diagnoses of gastrointestinal tuberculosis, Crohn's Disease (CD) and malignancy were listed. Colonoscopy revealed an ileocaecal mass extending to the ascending colon. Initial histopathological examination from the ileocaecal mass and the infra-umbilical nodule showed features suspicious of sarcoidosis with differential diagnoses of TB and inflammatory bowel disease (IBD). Second opinion was sought and concluded as chronic granulomatous inflammation. All specimens were negative for acid fast bacilli (AFB). Considering a high prevalence rate of TB in this region and exclusion of malignancy from the histopathological examination, she was empirically treated for TB. Anticoagulant therapy was also administered. She fully recovered after 2 months of treatment. ***Pathological findings:*** Both histopathological findings in two different laboratories showed similar findings. The infra-umbilical nodule revealed confluent non-caseating granulomas composed of mainly epithelioid histiocytes and multinucleated giant cells of Langhan's type. The ascending colon and ileo-caecal tissue showed active colitis with dispersed non-caseating granulomas within the lamina propria. Both samples were neither positive for malignancy nor presence of organism on special stains. The diagnostic dilemma lay between TB and IBD. ***Conclusions:*** Abdominal TB mimics various conditions, including IBD and malignancies. It should be considered as a possible diagnosis in TB endemic region, even in the absence of pulmonary TB. Presence of AFB confirms the diagnosis. When conventional testing fails to detect AFB, the decision to treat empirically can be controversial. In such cases, extensive and expensive investigations are needed to justify the diagnosis.

P16. Correlation between Gleason scores of prostate needle biopsies and those of prostatectomy specimens

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Introduction: Prostate adenocarcinoma is graded histologically using Gleason scoring with the latest modified Gleason grading system established in 2005. Gleason grading has 5 prognostic grade groups (PGGs); each is associated with different prognosis and treatment modality. This study aims to correlate between Gleason scores (GSs) of needle biopsies and those of corresponding total prostatectomy specimens, and the relationship between the percentage of Gleason pattern 4 (GP4) in GS7 needle biopsy groups and the pathological staging. ***Methods:*** Seventy eight cases that had needle prostate biopsy and subsequent radical prostatectomy in Hospital Kuala Lumpur between year 2010 and 2015 were retrospectively studied. The GSs of needle biopsies were compared with those of prostatectomy specimens. The percentage of GP4 in GS7 needle biopsy groups was correlated with the pathological staging. ***Results:*** Ages of patients at diagnosis range from 49 to 76 years with a mean age of 67 years. 29 patients (38%) have needle biopsy GS of 6, PGG I/V; 25 (32%) GS7(3+4), PGG II/V; 15 (19%) GS7(4+3), PGG III/V; 6(7%) GS8, PGG IV/V; and 3(3%) GS9, PGG V/V. Subsequent radical prostatectomy specimens show 10 patients (12%) have GS6; 36(46%) GS7(3+4); 23(29%) GS7(4+3), 1(2%) GS8; and 8(10%) GS9. Among 29 patients with GS6, 13 needle biopsies (48%) are upgraded to GS 7 (3+4), 3(11%) to GS 7(4+3) and 1(3%) to GS 8(3+5) in the radical prostatectomy specimens. 34 cases (80%) of GS 7 needle biopsy groups remain unchanged. Cohen's Kappa shows fair agreement in Gleason scoring between needle biopsies and prostatectomy specimens, $K = 0.324$ (95% CI, 6.94 to 7.29), $p < 0.0005$ and in the percentage of GP4 between GS7 needle biopsy groups and their corresponding radical prostatectomy specimens, $K = 0.399$ (95% CI 34.2 – 49.2), $p<0.0005$. In GS7 needle biopsy groups, there is a significant relationship between the percentage of GP4 and the pathological staging of radical prostatectomy, pT and pN ($p = 0.008$ and $p=0.001$ respectively). ***Conclusions:*** More than half of GS 6 (PGG I/V) needle biopsies are upgraded prognostically while majority of the GS7 needle biopsy groups of PGG II/V and III/V, remain unchanged after radical prostatectomy. The percentage of GP4 in GS7 needle biopsy groups is significantly related to the final pathological staging.

P17. Encapsulated papillary carcinoma of breast in a man: a rare entity

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Introduction: Carcinomas of the male breast are rare, accounting for less than 1% of all cases of breast carcinoma. Less than 2% of breast carcinomas are papillary carcinomas and a very small proportion of these are encapsulated papillary carcinomas. We present a case of encapsulated papillary carcinoma in a man with unusual features. ***Clinical case:*** A 50-year-old gentleman presented with an enlarging, non-tender left breast lump for 4 years. Ultrasound showed a large cystic mass (19.6 mm x 9 mm) with solid and calcified areas. Biopsy performed revealed an invasive ductal carcinoma, NST. This patient underwent mastectomy and axillary clearance. Intraoperative findings showed a breast lump which was fixed to the skin but not to the pectoralis major muscle. A final diagnosis of encapsulated papillary carcinoma with focal invasive ductal carcinoma, NST was made. Patient was offered chemotherapy, radiotherapy and hormonal therapy, however he refused further treatment and defaulted follow-up. ***Pathological findings:*** Macroscopic examination reveals a large uniloculated cyst containing greenish material with a solid whitish tumor nodule protruding into the lumen. Microscopic examination shows a thick fibrous cyst wall lined by papillary and micropapillary structures with a nodule protruding into the lumen. The neoplastic epithelial cells are arranged in solid and cribriform patterns, displaying mild to moderate nuclear pleomorphism. Intermingled high-grade ductal carcinoma in-situ (DCIS) (less than 10%) and two foci of invasive carcinoma, NST (2 mm at the largest dimension) are noted. This invasive component is of intermediate grade type (Modified Bloom and Richardson Grade 2). Immunohistochemistry for receptor status shows strong expression of estrogen and progesterone receptors as well Cerb-B2 oncoprotein (3+), which is unusual. ***Conclusions:*** This case is illustrative of an unusual breast carcinoma in a man as encapsulated papillary carcinoma is a rare entity in either sex. This tumor is usually of low grade with invasive foci, if present, also being low grade. It is usually negative for Cerb-B2 oncoprotein expression. However, in this case, the Cerb-B2 oncoprotein expression is strong (3+) and the invasive component has a higher grade, suggesting a need for close follow-up of the patient.

P18. A tertiary centre experience in diagnosing diffuse large B cell lymphoma based on the WHO classification 2008

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Introduction: Malaysian National Cancer Registry 2007 reported that lymphoma is the sixth most common cancer, while in Kelantan it is the fourth. Diffuse large B-cell (DLBCL) is a common type of adult non-Hodgkin lymphoma (NHL). It is a very heterogenous group of disease; its classification continues to evolve. Subdivision of DLBCL is based on morphology, immunophenotype and molecular entities. This study aimed to identify the subtypes of DLBCL in patients who were diagnosed in our center according to the WHO classification 2008. ***Methods:*** Cases with a final diagnosis of DLBCL were selected from the registry book and computerized database systems (LIS and PATHOS) of Pathology Department, Hospital Universiti Sains Malaysia, Kelantan for the years 2001 to 2014. These cases were subtyped based on the WHO classification 2008. Clinicopathological parameters (age, gender and ethnicity) were also included. ***Results:*** A total of 137 cases are included in this study. Majority are Malays (96%; 131/137) followed by Chinese (3%; 4/137). 54% (74/137) of them are males and 46% (63/137) are females aged between 1 and 81 years. The median age in the study population is 55 years. Majority of the cases are DLBCL, not otherwise specified (NOS) subtype (89%, 123/137) followed by T-cell/Histiocytes-rich Large B-cell Lymphoma (THRLBCL) (8%, 11/137), Primary mediastinal (thymic) large B cell lymphoma (2%, 2/137) and Primary DLBCL of the CNS (1%, 1/137). The most common variant of DLBCL, NOS is anaplastic variant 6% (8/137) followed by immunoblastic variant (5%, 7/137) and centroblastic variant (4%, 5/137). The remaining 75% of DLBCL, NOS (102/137) have no documentation of their morphological variants. ***Conclusions:*** Majority of the cases are classified into DLBCL, NOS. This study shows that DLBCL remains biologically and clinically heterogeneous, and classification of its variants is still evolving. New challenge is foreseen in the updated WHO classification 2016. Experience and updated knowledge are required for a proper sub-classification of DLBCL.

P19. Acute abdomen as the first presentation of Crohn's disease: a report of two cases

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Introduction: Crohn's disease is a relapsing and remitting systemic inflammatory disease, mainly affecting the gastrointestinal tract. The typical symptoms are diarrhoea, abdominal pain, weight loss and fatigue. As this disease is quite rare in Malaysia, it

can be misdiagnosed initially, leading to delayed diagnosis and further complications as shown by two cases we encountered. ***Clinical Case:*** We present two cases of Crohn's Disease with an unusual presentation in two adult males without a prior history of medical illness. The first case is a 50-year-old man who presented clinically with vomiting, intermittent epigastric pain and abdominal distension for one week. The second case is a 44-year-old man who presented with left hypochondriac mass for 3 months with an insidious onset of significant obstruction. Laporotomy with right hemicolectomy was performed in both cases under initial clinical impression of perforated diverticular abscess (first case) and obstructed colonic carcinoma with local infiltration (second case). In both cases, the diagnosis of Crohn's Disease was delayed and made after surgery. ***Pathological findings:*** Histopathological examination of the first resected specimen showed a constricting transverse colon lesion displaying edematous mucosa, thickened muscular wall and a linear abscess cavity at the mesenteric border in continuity to an adjacent ulcer. The second specimen showed an ulcerative mass-like lesion with visible penetration up to the depth of the muscularis propria. Both were eventually interpreted as colonic ulceration associated with marked transmural inflammation and fibrosis (features of chronicity); the overall features were in keeping with Crohn's Disease. ***Conclusions:*** Inflammatory bowel disease manifested in older patients can be confused with other diseases affecting the gastrointestinal tract. Although symptoms of Crohn's Disease may mimic other abdominal conditions, it should be considered as one of the causes of acute abdomen, especially in patients who have a long history of intestinal problems. Medical therapy remains the mainstay of treatment. However, surgical intervention is warranted in cases presenting with acute abdomen or other complications.

P20. Cutaneous Kaposi sarcoma with pyogenic granuloma-like features

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Introduction: Kaposi sarcoma (KS) is common among African and Western European populations, especially in human immunodeficiency virus (HIV) patients. It is caused by herpes virus/human herpes virus 8 (HHV8) infection. KS may involve skin, mucosa or visceral organs. A newly recognized variant of KS known as pyogenic granuloma-like Kaposi sarcoma (PG-like KS) has both overlapping clinical and histological features of pyogenic granuloma (PG) and KS. ***Clinical case:*** A 71-year-old Chinese gentleman had a medical history of diabetes mellitus with chronic kidney disease, hypertension, bilateral cataract and eczema. He denied any high-risk behavior; his HIV status was unknown. He presented with multiple reddish to brownish nodules in both upper and lower limbs for one month. The lesions were painless and non-itchy. No preceding trauma or insect bite was documented. ***Pathological findings:*** Histopathological examination showed a nonencapsulated fairly circumscribed dermal lesion composed of small to dilated capillary type vascular proliferation associated with surrounding mild inflammation and edema. The endothelial cells exhibited plump regular nuclei. The findings mimicked the appearance of PG. However, frequent mitosis, mild nuclear atypia and extravasated red blood cells were observed, favoring PG-like KS. ***Conclusions:*** It is challenging to diagnose KS when it mimics PG histologically. The presence of multiple nodules in both upper and lower limbs as in this case warrants a serious consideration and recognition of this variant of KS. Ideally, immunohistochemstry for HHV-8 latent nuclear antigen-1 (LNA-1) should be performed to confirm this diagnosis.

P21. Acquired cystic disease-associated renal cell carcinoma – a case report focusing on histological features

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Introduction: Acquired cystic disease (ACD)-associated renal cell carcinoma (RCC) has been recently introduced in the latest World Health Organization (WHO) classification of tumours of the kidney 2016 as a newly established entity. It has unique histomorphological features as this RCC exclusively arises from acquired cystic disease due to end stage renal disease (ESRD). ***Clinical case:*** A 56-year-old gentleman with ESRD had been on regular hemodialysis for 11 years. He had recurrent urinary tract infections and persistent hematuria due to infected, non-functioning right kidney. Ultrasound examination revealed multiple cysts in his right kidney. He underwent right nephrectomy procedure without clinical suspicion of malignant transformation. ***Pathological findings:*** Grossly, the kidney was reduced in size, showing markedly thinned parenchyma and loss of normal corticomedullary demarcation. Multiple cysts containing straw-coloured fluid were noted, measuring 2 mm to 50 mm in diameter. Two circumscribed solid cystic yellowish tumours were identified in the upper and lower poles. Histologically, the tumor was characterized by neoplastic cells appearing in microcystic pattern and sieve-like architecture. These neoplastic cells had ample eosinophilic or oncocytic cytoplasm and frequent intratumoral oxalate crystal deposition. ***Conclusions:*** It is easy to diagnose ACD-associated RCC in the context of ESRD. It has relatively good prognosis as compared to other types of RCC when detected at early stage. Therefore, it is important for pathologists to identify this entity and for all ESRD patients to be screened periodically for ACD-associated RCC.

P22. Chronic villitis in stillbirths of Hospital Serdang from years 2010 to 2012

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Introduction: Malaysian stillbirth rate is 4.6 per 1000 births per year. Stillbirth is still a major concern of pregnancy outcomes in Malaysia as this mortality data is used as part of the health indicator. Non-infectious chronic villitis of undetermined aetiology is identified in 5-10% of placentas submitted for the investigation of stillbirth. ***Methods:*** This is a retrospective, descriptive study using archived histopathological placental slides and clinical data from Malaysian-born stillbirths in Hospital Serdang from years 2010 to 2012. The frequency and severity grades of chronic villitis in these stillbirths were obtained. Associations between chronic villitis and the relevant demographic data and underlying clinical conditions were also statistically analysed using SPSS 21.0. ***Results:*** A total of 100 stillbirths are included in this study. The frequency of chronic villitis is 11.8% whereby 9.1% show low-grade chronic villitis and 2.7% show high-grade chronic villitis. The associations between frequency of chronic villitis as well as its grades and socio-demographic factors and underlying clinical conditions in the stillbirth cases in this study are not statistically significant ($p>0.05$). ***Conclusions:*** The frequency of chronic villitis in stillbirths at Hospital Serdang over 3 years is 11.8%, which is almost similar to the frequency of villitis of unknown etiology (5-15%) in other studies. Majority are low grade villitis, which is in contrast to other studies. Statistically, no significant associations are documented between chronic villitis and its grades with the maternal age, race, foetal gestation, and foetal weights as well as the underlying clinical conditions in our study.

P23. Pathologic features of colorectal cancer in Northern Peninsular Malaysia

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Introduction: Colorectal cancer, as reported in The National Cancer Registry Report 2007, is the top and third most frequent cancer in males and females, respectively in Peninsular Malaysia. Pathologic analysis of resected specimens is an essential tool in providing vital information for both, clinical management and prognostication of affected patients. We described pathologic characteristics of colorectal cancers based on resected specimens from northern Malaysian Peninsular patients. ***Methods:*** Data on histopathologic features and patient demography were retrieved from Malaysian National Colorectal Cancer Registry (NCPR) – Colorectal Cancer, provided by 22 participating hospitals from the northern Peninsular Malaysia, inclusive of Perak, Penang, Kedah and Perlis states. Only histologically confirmed cases of colorectal adenocarcinoma with resected bowel from years 2008 till 2014 were included. Pathologic staging followed TNM 5th edition staging system. ***Results:*** There were a total of 2213 resected colorectal cancer specimens from 2166 patients. The majority of these patients were males (54.9%), of Chinese ethnicity (55.5%) and in age group of 60-69 years (31.3%). Colonic and rectal tumours were seen in 41.8% and 58.2% of the specimens, respectively. Additionally, 12.8% and 86.5% were right and left sided tumours, respectively. Tumour found on both side in 0.7% of the specimens. Most (94.0%) were adenocarcinoma of usual type, of which, 84.6% were moderately differentiated. Locally advanced tumours (pT3 and pT4) were seen in more than half of the specimens and about 52.6% had nodal metastasis (pN1 and pN2). For 661 specimens with information on angiolymphatic and extramural venous invasion, the features were seen in 27.5% and 26.4% of these specimens, respectively. ***Conclusions:*** Colorectal adenocarcinoma in Northern Peninsular Malaysia was seen more in older age group, male and Chinese ethnic. Left sided tumours were more common. The majority were moderately-differentiated adenocarcinoma of usual type. About a quarter of specimens had angiolymphatic and/or extramural venous invasion. Locally advanced tumours were seen in 83.9% of the specimens and 52.6% had nodal metastasis.

P24. Intestinal Mucormycosis: a tale of two cases

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Introduction: Mucormycosis is a rare and life-threatening infection caused by fungi of the order Mucorales, with Rhizopus and Mucor being the most common isolated species. The infection typically occurs in immunocompromised patients, such as those with uncontrolled diabetes mellitus (DM), malnutrition, corticosteroid dependency and organ transplant. Rhinocerebral infection is the classical manifestation of mucormycosis. Primary gastrointestinal (GI) disease is the least frequent form of presentation and its symptoms are typically non-specific, which may lead to delayed therapy. We report 2 cases of mucormycosis of small

intestine in patients with underlying DM. ***Clinical Case:*** Case 1: A 44-year-old lady with multiple medical problems including type 2 DM, presented with symptoms of acute gastroenteritis, left labia majora swelling, fever and constitutional symptoms. She was subsequently ventilated due to poor Glasgow coma score. A clinical diagnosis of septicaemic shock secondary to labia major abscess was made. However, incision and drainage revealed minimal pus with negative bacterial culture. Abdominal ultrasound and review of CT scan suggested intra-abdominal fluid collection, which was suspicious of abscess. 10 days after her initial presentation, diagnostic laparoscopy followed by laparotomy was performed and revealed a 4.5cm-segment of gangrenous and perforated small intestine. Case 2: A 61-year-old male with multiple medical problems including type 2 DM, presented with right hypochondriac pain, fever and cough with whitish sputum. Clinically, he had signs of peritonitis and bowel perforation was suspected. Laparotomy revealed a gangrenous small bowel segment of 110cm long. Both patients succumbed to the illness. ***Pathological findings:*** The resected small bowels in both cases show features of acute infarction with presence of abundant broad and non-septate fungal hyphae across the intestinal wall including the vascular wall and lumen, in keeping with angioinvasion. ***Conclusions:*** Mucormycosis of the GI tract is an uncommon life-threatening opportunistic fungal infection that may give rise to non-specific symptoms. It must be included in the differential diagnosis as one of the underlying causes of ischemic colitis, especially in immunocompromised patients.

P25. Family history as a predictor for colorectal cancer

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Introduction: Colorectal cancer (CRC) is the second most frequent cancer in Peninsular Malaysia. From years 2008 to 2014, there were 3,855 patients diagnosed with CRC within the Northern Region. The overall crude incidence and mortality rates were 53.2 and 23.1 cases per 100,000 populations in Northern Malaysia, respectively. Though most CRC cases are sporadic, the presence of a family history of CRC is a significant risk factor. In aggregate, prior analyses suggests that among people with a family history of CRC and other cancers (non-CRC), those who were younger were at a particularly higher risk. Endoscopic screening would thus be relevant. As such, this study looked into the degree of importance of having a family history of CRC and non-CRC and sought any statistically significant association when compared patients who were younger to those older than 50 years. ***Methods:*** This is a retrospective analysis from the National Cancer Patients Registry – Colorectal Cancer: Northern Region Malaysia from years 2008 to 2014. Our inclusion criterion was patients diagnosed with CRC who had a positive family history of malignancy. The Pearson's Chi-squared test was adopted to test the association between the defined age group and their related family history. ***Results:*** Our data revealed that 3.5% (n=138) and 3.9% (n=152) had a positive family history of CRC and non-CRC, respectively. The percentages of patients who had a positive family history of CRC younger than 50 years (n=35) and those more than 50 years group (n=103) were 11.4% and 6.1% respectively. The denominator included all the patients with or without a family history of CRC based on the relevant age groups (n=306 and n=1,690, respectively). Pearson's chi-squared test showed a statistically significant association between patients who had a family history of CRC and all-age group (p value = 0.001), whereas a positive family history of non-CRC was not associated with all-age groups (p value = 0.106). ***Conclusions:*** There is a strong association between a positive family history of CRC and patients of all-age group. Percentage of CRC patients who had a positive family history (of CRC) is also higher in the younger age group. A positive family history can indeed be a valid predictor of CRC risk in keeping with international guidelines.

P26. National Cancer Registry – Epidemiology of colorectal cancer in the Northern region of Malaysia

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Introduction: The National Cancer Registry – Colorectal Cancer is a multi-centre and multidisciplinary project which aims to systemically collect data on all aspects of colorectal cancer (CRC) relevant to its prevention, management and treatment evaluation in Malaysia. ***Methods:*** Data from years 2008 to 2014 on prevalence, incidence, clinical aspects and treatment modalities of CRC were collected from all public and private hospitals in the northern region of Malaysia. Data crosscheck for consistency and reliability was performed with cancer database of northern state registries of Perlis, Kedah, Penang and Perak. ***Results:*** Incidence and mortality: Overall CRC crude incidence rate and mortality rate were 53.2 cases per 100,000 and 23.1 cases per 100,000 respectively. Demographic: Majority of patients were Chinese (55.5%), followed by Malays (37.8%), Indian (5.9%) and others (0.8%). The mean age of CRC patients was 63.1 years; the peak was at the age of 60-64 and 65-69 years. Risk factors and clinical presentation: 21.7 % of CRC patients had diabetes mellitus, 13.1% were active smokers, 20.5% were former smokers, and 7.2% had a positive family history of CRC. Altered bowel habit was the most common presentation of CRC (21.7%) followed by abdominal pain (18.1%), blood in stool (16.6%), anemia (4.9%), loss of appetite (4.8%) and intestinal obstruction (3.5%). Primary diagnosis and final staging: The most common site of CRC was rectum (35%). 61.3% presented late at Stage III and IV, only 12.2% were diagnosed at Stage I. Histologically, 92% of CRC patients had adenocarcinoma while 1.7% were categorized

into other type. 83.4% patients had moderately differentiated tumors, followed by 10.7 % of differentiated tumors and 5.9% of poorly differentiated tumors. Treatment modalities: 2619 patients underwent surgery; 1104 patients had adjuvant chemotherapy and biological therapy. 22 patients opted for complementary / alternative treatment. The 5 most commonly performed surgeries were low anterior resection (15.5%), right hemicolectomy (15.4%), sigmoid colectomy (6.9%), high anterior resection (6.2%) and left hemicolectomy (6%). Most patients underwent chemotherapy with De Grammont regime (13.3%) followed by FOLFOX (13.1%) and XELOX (10.7%). There were 345 patients who did not receive any of the therapies. ***Conclusions:*** This report should be able to serve as a guide to health providers, no-governmental organizations (NGOs) as well as policy makers in order to improve CRC prevention, management and control.

P27. An audit on urine cytological examination in Hospital Pulau Pinang

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Introduction: Urine cytological examination is a common screening test for urothelial carcinoma of the urinary tract. Urine cytology is also a cheap and easy investigation for surveillance monitoring in patients with known urological malignancies. ***Methods:*** A total of 306 voided urine samples from 112 patients received in the Cytology Unit of Hospital Pulau Pinang over a period of three months from October 2015 to December 2015 were included in this study. The demography data, indications for investigation and cytological and histological correlation if available were analysed. ***Results:*** The patients were made up of 55% male and 45% female; the most were between the 50 to 90 years age group (91%). The commonest indication was haematuria, accounting for 257 samples from 87 patients (78%), followed by surveillance for 10 cases (9%), other indications for six cases (5%) and unknown indication for nine cases (8%). Fourteen out of the112 cases (12.5%) were interpreted as malignant/atypia. In this subset, nine cases (64.3%) had a subsequent biopsy with confirmation of malignancy, resulting in a 100% cytology-histopathology correlation. The remaining five cases were lost to follow-up at the point of care. Thirty-three out of the 112 cases (29.5%) were interpreted as inflammatory. In this subset, five cases were biopsied and only one case was positive for urothelial carcinoma. Sixty-five out of the 112 cases were interpreted as no malignancy (58%). In this subset, four cases were biopsied and only one case was positive for renal cell carcinoma. ***Conclusions:*** Urine cytological examination is a common investigation. Haematuria is the commonest indication for investigation followed by bladder carcinoma surveillance. Preliminary data shows that urine cytological examination is a good adjunct tool for malignancy screening and follow-up in patients presenting to the urology clinic.

P28. Multicystic placenta: a rare case of placental mesenchymal dysplasia

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Introduction: Placental mesenchymal dysplasia is a rare entity that is attributed to placental vascular abnormalities; it produces a multicystic appearance that is often confused with molar pregnancy. Given this appearance, it may be detected antenatally via ultrasonographic examination. ***Clinical Case:*** A 33-year-old Malay primigravid lady at 33 weeks of gestation presented with reduced fetal movements. She had already been under follow up for ultrasonographically abnormal placenta with a multicystic appearance. Amniocentesis had been performed earlier and it showed no evidence of clonal chromosomal abnormalities. The mother only had mild anaemia but otherwise no antenatal problems. She subsequently delivered a stillborn baby weighing 1.74kg. The placenta was submitted for histopathological examination. ***Pathological findings:*** The placenta appeared bulky, weighing 850g collectively; it measured 170x170x55mm. A truncated umbilical cord was attached, measuring 35mm in length. Sectioning showed multiple variably sized cystic spaces resembling vesicles within the placental parenchyma without obvious mass, infarction or haemorrhage. Scattered large stem villi showed marked hydropic oedema and contained thick walled vascular channels. No fibrinoid necrosis was noted. The umbillical cord was unremarkable. Histological features were that of placentomegaly with massive hydrops, suggestive of placental mesenchymal dysplasia. Expert review was sought, which replied a concurring opinion. ***Conclusions:*** Even though placental mesenchymal dysplasia is a rare entity, the abnormality may be detected clinically by obstetricians. Confirmation of this diagnosis requires submission of the entire placenta instead of small portions of it in usual local practice. An important histological differential diagnosis is hydatidiform mole.