

Published Research -SQCCCRC

Gastrointestinal Cancers Program (2023)

1. Ahmad Al Ghoche, Abdullah Al Rawahi, Rami Abu Omar, Asma Naz Nadaf, Anjali Jain, Sercan Yilamz and Mansour Al-Moundhri. Synchronous Cervical Esophageal Squamous Cell Carcinoma Esophagus and GEJ Adenocarcinoma In A Post Allogeneic Transplant In Acute Lymphoblastic Leukemia Patient: Complex Management Issue Of A Very Rare Presentation. Authorea Preprints; 2023. DOI: 10.22541/au.167342605.54051568/v1.

Our case highlights a rare presentation of simultaneous esophageal adenocarcinoma and squamous carcinoma. His treatment was challenging. He was given neoadjuvant FLOT4 protocol followed by surgery then adjuvant chemoradiotherapy and finally adjuvant FLOT4. He is currently in remission.

2. Metachronous Adrenal Metastasectomy In Treated Rectal Cancer: Case Report and Literature Review [Al Ghoche, A., Omar, R. B., Al-Moundhri, M. (2023). Metachronous Adrenal Metastasectomy In Treated Rectal Cancer: Case Report and Literature Review. Int J Cancer Res Ther, 8(2), 31-33. <https://doi.org/10.33140/IJCRT.08.02.01>].

Adrenal metastases are frequent in cancer patients. However, isolated adrenal lesions in colorectal disease are rare. In this report, we discuss the case of a young patient who was found to have an isolated adrenal lesion few months after primary diagnosis of rectal cancer. A rectal mass biopsy at presentation was consistent with moderately differentiated adenocarcinoma. Pre-operative staging was negative for distant metastases. The patient was treated with concurrent long course neoadjuvant chemoradiotherapy followed by laparoscopic abdomino-peritoneal resection. Final pathology was ypT3N1cM0. Patient refused any further chemotherapy in the adjuvant setting. Patient was kept on follow up and PET scan in September 2019 showed an FDG avid lesion in the left adrenal gland- suspicious for metastases. In January 2022, he underwent laparoscopic left adrenalectomy and histopathology came as metastatic moderate to poorly differentiated adenocarcinoma in keeping with colorectal primary. Post metastasectomy, he received 12 cycles of pseudo adjuvant FOLFOX till 6/09/2022. Since then, patient is on regular follow up and the last PET in October 2022 was negative for recurrence of disease.



3. **Rami Abu Omar, Ahmad Al Ghoche and Mansour Al Moundhri.** Cetuximab-induced Facial Hypertrichosis in a Female Patient Treated for Metastatic Colon Adenocarcinoma. Oman Medical Journal-Archive (omjournal.org).

Anti-epidermal growth factor receptor (EGFR) antibodies are standard of care in the management of metastatic colorectal and head and neck cancers as a targeted therapy inhibiting tumor proliferation. The inhibition of EGFR pathway in the skin results in several cutaneous complications such as skin rash, hypertrichosis, and male pattern alopecia. We report a case of a 55-year-old female patient who developed hypertrichosis following six cycles of Cetuximab with a normal hirsutism-related hormone profile

4. **Nadaf A, Al Haddabi IH, Telugu RB, Al Moundhri MS.** Signet Ring Cell Carcinoma of the Rectal Stump in a Known Ulcerative Colitis Patient. Autopsy Case Reports.2023;13:e2023418
<https://doi.org/10.4322/acr.2023.418>

This case report highlights the importance of regular endoscopic surveillance in the Ulcerative Colitis patients. They are at risk of developing colorectal carcinomas. Signet ring cell carcinoma are very aggressive subtype of colorectal adenocarcinoma. Owing to its advanced stage of presentation and dismal prognosis, regular endoscopic surveillance must be undertaken irrespective of the surgical status. The current study reports a case of signet ring cell carcinoma of the rectal stump in a post colectomy patient of long-standing ulcerative colitis.

5. **Abou Rached Antoine, Sanyour Joyce, Saba Jowana, Abou Khalil Melissa, Rasha Matar, Khalil Pierre, Khairallah Saad,** Characteristics of Polyps in Lebanese population. Int J Med Res Rev. 2023;11(1):1-9.

The objective of this study is to describe the characteristics of the polyps in the Lebanese population and evaluate dysplasia and its relation to the polyps' locations. A retrospective descriptive study was conducted at the Department of the National Institute of Pathology in Lebanon and comprised a biopsy of colonic polyps or resected polyps from patients from 2007 to 2009. We collected demographic data and polyps' characteristics. Then, we divided patients according to age sex, location, and histology.



With 2298 polyps in 1470 patients, the mean age was 57.45 with 68% aged more than 50yo. 75.6% have one polyp and multiple polyps are more commonly found in older patients (> 50 years). More than 20 % of polyps are found in the recto-sigmoid area. In the right colon, people older than 50 years were more likely to have polyps (19%) compared to those < 30 years (8.3%) ($p < 0.05$). In the rectum, people < 30 years were more likely to have polyps compared to those > 50 years ($p < 0.01$). Concerning histology, tubular adenoma is the most common type and is more prevalent in the left colon. Hyperplastic polyps are mainly found in the recto-sigmoid area and mainly in the age group 30-50 in contrast to adenomatous polyps found over 50yo. Adenocarcinomas and/or degenerative polyps were founded in 5.9% of our population. In conclusion, this study gives valuable information on colorectal polyps in the Lebanese population regarding age, sex, dominant histology and anatomic location. We noted a male predominance and mainly above 50 years old. The majority had single polyps, and >50% of polyps were localized in the rectosigmoid. Adenomatous polyps were the most common type.

6. Abou Rached Antoine, Al Alam Farid, Zaiter Aline¹ and Joyce Sanyour (2023) Aloe vera Induce Acute Liver Injury and Chronic Liver Disease: Case Report. *World J Case Rep Clin Imag.* 2023 Mar-April; 2(1)1-7.

Herbal induced liver injury is increasing, usual spontaneous resolution is noted in the majority of cases but few cases were reported to had chronic liver disease and required liver transplantation. Aloe vera, an herbal supplement, is known to induced hepatitis, typically self-limited once the herb is stopped. We reported the first case with acute hepatic injury due to Aloe Vera associated with nephrotoxicity and chronic hepatic injury.

7. Shalaby A, **Telugu** RB, Deshpande PA, Qureshi A, Al Adawi H, Al Harthi S, Al Hinai K, Al Miskry H, Nadaf A, Niaz Z, Al Riyami M, Itkin B, Al Haddabi IH. Malignant Gastrointestinal Neuroectodermal Tumor of Small Intestine Showing DOG1 Expression: A Case Report and Review of Literature. *Int J Surg Pathol.* 2023 May 29;10668969231176020. doi: 10.1177/10668969231176020. Epub ahead of print. PMID: 37248556.

Malignant gastrointestinal neuroectodermal tumor (GNET), also referred to as clear cell sarcoma-like tumor of the GI tract is a rare mesenchymal tumor of the gastrointestinal tract. Here we report a case of GNET arising in the small intestine with aberrant DOG1 expression posing a diagnostic challenge. GNET is an extremely rare and aggressive tumor with frequent



local recurrence and lymph node metastasis. It has to be distinguished from various mimickers including gastrointestinal stromal tumor (GIST). Intestinal tumors with epithelioid to spindle cell morphology with DOG1 expression alone may pose a diagnostic challenge. Most GNET demonstrates EWSR1 gene rearrangement. In this context, the combination of clinical, histomorphological, immunohistochemical, and molecular features helped to establish a proper diagnosis.

8. J. Sanyour, R. Shehab, C. Yagi, S. Khairrallah, A. Abou Rached. The association between the severity of histologic lesions with the disease location and presence of colonic lesions in patients with UC. Journal of MAR Gastroenterology volume2 issue.

With the introduction of biologic treatment for IBD, the current objective is to achieve mucosal healing; however, the ultimate goal would be to achieve histologic remission. Multiple histological scores evaluate the disease activity in ulcerative colitis including GEBOES, GUPTA, Gramlich, amongst others. The first objective of this study was to assess the severity of histologic lesions in patients with UC using these three scores and to check if there is an association with disease location, presence of pseudopolyps, dysplasia and cancer. The second objective was to determine whether there was an interscore agreement between the validated GEBOES score and the two simplified but non-validated scores (Gralimish and Gupta).

This is a retrospective study whereby all UC pathology reports collected between 2006 and 2015, were reviewed and subjected to a second reading in a tertiary referral center. Geboes, Gupta and Gramlich scores were used to evaluate the severity of the histologic lesions.

1096 patients with UC were included in this study; 35.6% of them had their first disease flare, 27.2% had a relapse and 10.2% had quiescent disease. Based on Monreal classification, 53 % of patients were E3; 20.2% of patients were E2 and 26.8% E1. Hyperplastic polyps were found in 1% of the patients, adenomas in 2.5% of the patients and inflammatory pseudopolyps in 6.1% of the patients. There was no difference in locations of the hyperplastic polyps and adenomas. In patients with adenomas, low grade dysplasia was noted in 82.8%, high grade dysplasia in 10.3% and cancer in 6.9%, whereas 1.6% of patients with inflammatory pseudopolyps had dysplasia. The presence of flat dysplasia and cancer on colonic biopsies was 0.8% and 0.9% respectively, with a mean age of 63 years for patients with dysplasia



and 56 years for patients with cancer. There was no difference in the presence of hyperplastic polyps and adenomas in regards to the different disease locations. Regarding histological severity, high correlation coefficient was found between the different ulcerative colitis severity scores. Histological severity scores (Geboes, Gupta, or Gramlich) were not associated with an increased occurrence of adenomas or dysplasia.

In conclusion, we found no correlation between pathological severities and the age, phenotype, also no correlation between the presence of adenoma and hyperplastic polyps compared to the location and histological severity. We also demonstrate a high correlation between the 3 scores used (GEBOES, Gralmish and Gupta), this data should be confirmed by further prospective studies.

8. Al Hinai M, Malgundkar SH, Gupta I, Lakhtakia R, Al Kalbani M, Burney I, Al Moundhri M, Okamoto A, Tamimi Y. Epigenetic status of FBXW7 gene and its role in Ovarian cancer pathogenesis. *Asian Pac J Cancer Prev.* 2023 May 1;24(5):1583-1590. doi: 10.31557/APJCP.2023.24.5.1583. PMID: 37247277; PMCID: PMC10495899.

Chromatin immunoprecipitation (ChIP) analysis revealed that the FBXW7 gene and the long non-coding RNA (LINC01588) are potential candidates in epithelial ovarian cancer (EOC) pathogenesis. However, their exact role in EOC is not yet known. Thus, the present study sheds light on the impact of the mutations/ methylation status of the FBXW7 gene. **Materials and Methods:** We used public databases to assess the correlation between mutations/ methylation status and the FBXW7 expression. Furthermore, we performed Pearson's correlation analysis between the FBXW7 gene and LINC01588. We performed gene panel exome sequencing and Methylation-specific PCR (MSP) in HOSE 6-3, MCAS, OVSAHO, and eight EOC patients' samples to validate the bioinformatics results. **Results:** The FBXW7 gene was less expressed in EOC, particularly in stages III and IV, compared to healthy tissues. Furthermore, bioinformatics analysis, gene panel exome sequencing, and MSP revealed that the FBXW7 gene is neither mutated nor methylated in EOC cell lines and tissues, suggesting alternative mechanisms for FBXW7 gene regulation. Interestingly, Pearson's correlation analysis showed an inverse, significant correlation between the FBXW7 gene and LINC01588 expression, suggesting a potential regulatory role of LINC01588. **Conclusion:** Neither mutations nor methylation is the causative mechanism for the FBXW7 downregulation in EOC, suggesting alternative means involving the lncRNA LINC01588.



9. **Bushra Salman, Fatma Al-Rasbi, Nameer Al-Ward, Khalid Al-Baimani, Ikram A Burney, Eman Abdullah, Buthaina Al-Azizi, Khulood Al-Mishaikhi, Ibrahim Al-Zakwani, Mansour Al-Moundhri. Predictors of Hypersensitivity Reactions to Platinum-Based Chemotherapy in a Tertiary Care Hospital in Oman: A case control study. *Sultan Qaboos Univ Med J.* 2023 May;23(2):233-2382023. doi: 10.18295/squmj.1.2023.001. PMID: 37377836 PMCID: PMC10292603.**

This retrospective case control study of 186 patients (case: control ratio 1:4), aimed to estimate the prevalence and evaluate risk factors of hypersensitivity reactions (HSRs) to platinum-based chemotherapies (PBCs) in cancer patients. PBCs play an important role in cancer therapy. However, one of the drawbacks of PBCs is the occasional occurrence of HSRs, which can lead to serious consequences.

We found that the prevalence of HSRs to PBCs was 4.7% (95% confidence interval: 3.33-6.37%), higher with carboplatin compared with cisplatin and oxaliplatin. The female gender ($P = 0.032$), concomitant taxanes ($P = 0.002$) and concurrent radiation ($P < 0.001$) were significant predictors of HSRs to PBCs. The majority of the reactions were of mild to moderate severity, and the re-challenge rate after HSR development was 13%. The results of this study may impact therapy decisions and understanding the risk factors is important to improve treatment outcomes in cancer patients.

10. **Banibakr, Aed Abdelqader Mari; Imran, Muhammad¹; Abu-Omr, Rami²; Siddiqui, Tahira³; Al-Moundhri, Mansour⁴. 5-Fluorouracil Related Encephalopathy and Status Epilepticus: A Case Report. *Journal of Radiation and Cancer Research* 14(2):p 97-100, Apr–Jun 2023. | DOI: 10.4103/jrcr.jrcr_84_22.**

5-Fluorouracil (5-FU)-based chemotherapy has been widely used in the treatment of different cancer in adjuvant and metastatic settings. The common side effects related to 5-FU are gastrointestinal toxicity including nausea, vomiting, diarrhea, and stomatitis as well as myelosuppression, hand-and-foot syndrome, and coronary vasospasm. In the medical literature, only rare cases of 5-FU-related encephalopathy are reported. We report a 51-year-old male patient with gastric adenocarcinoma who developed acute neurotoxicity and recurrent seizures after he underwent the first session of 5-FU chemotherapy treatment. Neurotoxicity is an important complication due to 5-FU and should not be overlooked when the patient is being treated with this chemotherapeutic agent, alone or in combination with other drugs. It runs an unpredictable course and may



result in significant morbidity and mortality. The supportive and symptomatic management should be considered to avoid complications related to neurological side effects.

11. Al Farai A et al. Errors that could happen during laparoscopic distal pancreatectomy. June 2023. *Annals of Hepato-Biliary-Pancreatic Surgery* 27(1): S467-S467. DOI: 10.14701/ahbps. 2023S1.BP-VE-16.

This is a surgical technical video which was shown during the Korean HPB surgery week and the 58th annual congress of the Korean Association of HPB surgery in March 2023. It demonstrates some potential errors that could happen during laparoscopic distal pancreatectomy.

12. Al Farai A et al. Protection of the gastroduodenal artery stump and closure of the posterior pancreatic stump in the presence of portal annular pancreas. June 2023. *Annals of Hepato-Biliary-Pancreatic Surgery* 27(1):S459-S459. DOI: 10.14701/ahbps. 2023S1.BP-VE-8

This is a surgical technical video which was shown during the Korean HPB surgery week and the 58th annual congress of the Korean Association of HPB surgery in March 2023. It reveals one of the surgical techniques used to protect the gastroduodenal artery stump and to close the posterior pancreatic stump in the presence of portal annular pancreas with the use of the peritoneal sheath.

13. POSTER ESMO GI 2023

- "DPYD Gene Variants and Chemotherapy-Induced Toxicity in Omani Patients with Gastrointestinal Tumors",
[https://www.annalsofoncology.org/article/S0923-7534\(23\)00402-7/fulltext](https://www.annalsofoncology.org/article/S0923-7534(23)00402-7/fulltext)

Fluoropyrimidine (FP) based drugs are used in treatment of several cancers with significant toxicity profile. The most severe and lethal forms of toxicity have been attributed to dihydropyrimidine dehydrogenase (DPD) enzyme deficiency. The DPYD gene encodes the DPD enzyme, which metabolizes FP drugs. Genetic polymorphisms of the DPYD gene can result in complete or partial deficiency of the DPD enzyme, leading to significant mortality and morbidity. Although the prevalence of DPYD gene polymorphisms has been reported in various populations, no studies have been conducted in the Omani population. This study aimed to identify variants of the DPYD gene and their association with chemotherapy-induced toxicity in Omani patients with gastrointestinal (GI) cancers receiving (FP) chemotherapy.

