Method: 778 images of breast carcinoma slides from Sunshine Coast University Hospital were split into training, validation and test sets and labelled by a trained non-pathologist.

A ScaledYOLOv4 computer vision architecture was trained on 659 images, and the model was evaluated on the validation set (68 images), unseen by the model during training.

Results: The model demonstrated a sensitivity of 0.92 and a positive predictive value (PPV) of 0.64.

Discussion: The model's main weakness is its frequent misidentification of pyknotic cells. The model is most effective in tumours with high mitotic counts, as the ratio of mitotic figures to pyknotic cells is high.

Next steps include creating open-source databases for improved image quantity, and standardisation of data to encourage further, higher quality open-source projects.

Reference

1. Pantanowitz L, Hartman D, Qi Y, *et al.* Accuracy and efficiency of an artificial intelligence tool when counting breast mitoses. *Diagn Pathol* 2020; 15: 80.

OSSEOUS METAPLASIA OF A THYROID NODULE

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While thyroid nodules commonly show calcification secondary to haemorrhage and necrosis, it is extremely rare for thyroid tissue to show true bony metaplasia. Ten cases of bony thyroid metaplasia have been reported in English literature to date, and all cases were female. Also, reports of 32 cases of thyroid extramedullary haematopoiesis (EMH) noted that ten included bony areas. All patients with bony metaplasia in EMH were female, as were all but two of the cases of thyroid EMH without bone.

We present the case of an obese 51-year-old male with no relevant medical history, who required hemithyroidectomy for a TIRADS-5 thyroid nodule which could not be biopsied. It was found to be a colloid nodule with areas of lamellar bone and fatty marrow, without extramedullary haematopoiesis. To our knowledge, this is the first reported case of osseous thyroid metaplasia in a male.

CARCINOSARCOMA OF THE UTERUS IN ASSOCIATION WITH TAMOXIFEN THERAPY – A CASE REPORT

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Tamoxifen is a nonsteroidal triphenylethyl compound which is widely used in the treatment of breast cancer. In addition to having anti-oestrogenic properties, tamoxifen also exhibits weak oestrogenic effects and acts on the uterine endometrium. Treatment with this drug may result in a spectrum of proliferative endometrial lesions, which include simple and atypical hyperplasia, hyperplasia with polyp formation (single and multiple), adenocarcinoma and rarely sarcomas. Patients on tamoxifen should be closely monitored for endometrial lesions. We present the case of a 54-year-old female with uterine carcinosarcoma arising in the setting of tamoxifen therapy.

Reference

1. McCluggage WG, McManus DT, Lioe TF, *et al.* Uterine carcinosarcoma in association with tamoxifen therapy. *BJOG* 2005; 104: 748–50.

IGG4-RELATED LIVER DISEASE, PRESENTING AS A LIVER TUMOUR (A CASE REPORT AND REVIEW OF LITERATURE)

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IgG4-related disease is a multisystemic fibroinflammatory condition, although the liver involvement by the disease is rare. The disease is characterised by distinctive histopathologic features, most notably dense lymphoplasmacytic infiltrate, storiform fibrosis, and obliterative phlebitis. The diagnosis should be made only by an interdisciplinary approach to correlate clinical history, pathological picture and radiological findings. We report a case of an 80-year-old male patient presenting with a left lower lobe liver mass. An intrahepatic cholangiocarcinoma was suspected on imaging studies. The patient underwent left hemi-hepatectomy. Macroscopically there was a poorly circumscribed firm tumour measuring up to 47 mm, present within liver parenchyma. Microscopic examination showed dense hyalinised fibrotic hypocellular tissue with fibroblastic proliferation admixed with lymphoplasmacytic infiltrate with focal formation of lymphoid follicles. The entire lesion was then submitted and no malignancy was detected. IgG and IgG4 immunohistochemical stains demonstrated an increase in number of IgG4 positive cells (more than 30 per high power field), as well as an increase in the ratio of IgG4 to IgG positive plasma cells. This immunophenotype is in keeping with IgG4-related liver disease.

PRIMARY SPLENIC FOLLICULAR LYMPHOMA

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Follicular lymphoma is primarily a nodal disease, with the spleen most commonly secondarily involved. The most common splenic haematolymphoid neoplasms are splenic marginal zone lymphoma and hairy cell leukaemia, and primary splenic follicular lymphoma is extremely rare. We report a case of a 60-year-old male patient presenting with massive splenomegaly without lymphadenopathy, with a past history of lung squamous cell carcinoma. The patient underwent splenectomy, which on gross examination revealed multiple tan granular nodules throughout the splenic parenchyma. Microscopically, there was expansion of white pulp by admixed generally small cleaved and elongate lymphocytes with scattered larger centroblast-like cells together with background small mature lymphocytes, without marginal zone formation. There were less than 5 centroblasts per high-power field. On immunohistochemistry, the atypical lymphoid cells were positive for CD79a, CD20, BCL6, BCL2 and CD10; and they were negative for CD5, CD23, and CD3. Fluorescence *in situ* hybridisation was performed, identifying the characteristic BCL2 rearrangement of follicular lymphoma, tumour graded WHO grade 1 with Ki67 proliferative index of