Abstract IDDF2018-ABS-0260 Table 1 Endoluminal scene semantic segmentation results for different architectures

Architecture	IoU background	IoU polyp	IoU mean	Acc mean
FCN8	94.024	46.99	70.51	94.32
SegNet	94.897	53.795	74.346	95.183
ResNet with changes	96.029	64.0307	80.0299	96.291

Conclusions Compare to traditional time-consuming hand-crafted segmentation methods, when considering polyp segmentation, approaches based on deep learning are time-saving and effective, showing good results in colonoscopy images. Given that three architectures we mentioned above not only performs well but also allows for nearly real-time processing, it has a great potential in polyp localization and segmentation.

IDDF2018-ABS-0261 POLYP DETECTION USING AN UNET BASED MODEL

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Background Polyp is an important cause of Colorectal cancer. Wireless Capsule Endoscopy(WCE) has been widely used in direct inspection of the gastrointestinal tract without any surgical operation. Doctors need screen twenty thousand pictures per patient manually, which is time-consuming and tedious work. Recently, Deep Convolutional Neural Networks (DCNNs) shows state of the art performance in various high-level vision tasks. Therefore we present a computer-aided diagnosis model which utilises Unet to detect polyp automatically.

Abstract IDDF2018-ABS-0261 Figure 1 Segmentation results. Columns from left to right: origin image, ground truth, segmentation result

Methods Unet is proposed for biomedical image segmentation in recently years, showing the start of art result. In pre-processing stage, we utilise a weighted average filter to remove light spots covering polyps. Our model contains three downscale blocks and three upscale blocks. The downscale module consists of two 3*3 conv layers and a max-pooling layer which captures high-dimensional characteristics and reduces the feature maps size. In every upscale module, we add a bilinear up-sampling layer to recover the spatial information. In addition, the upscale module's output is connected to previous downscale module's output, which promotes integration between low-level features and high-level features and accelerates the convergence of model. In the end, we use a median filter to remove small mistake response region caused by the poor environment in the gastrointestinal tract and fill small holes using morphology.

Results We train and test our model on CVC dataset that contains pixel-level polyp segmentation label. The dataset are divided into 656 (train), 169 (validation), and 87 (test) images. The results are evaluated in terms of pixel intersection-over-union (IOU). Our method finally obtains 73.91% on IOU and operates at 23.25 fps (Frames Per Second) that is far faster than screening manually. As shown in figure 1, the result is good enough to locate polyps.

Conclusions The result shows that our method can provide efficient and accurate assistance in the diagnosis of the digestive tract, which greatly reduces the workload of doctors. It thus has a potential to apply to *clinical examination*.

IDDF2018-ABS-0262 PRIMARY INTESTINAL LYMPHANGIECTASIA IN YOUNG ADULT – A RARE CAUSE OF PROTEIN LOSING ENTEROPATHY

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Background Primary intestinal lymphangiectasia is a rare disorder characterised by dilated intestinal lacteals, causing lymph leakage into bowel lumen leading to lymphopenia, hypoalbuminemia, hypogammaglobulinemia, protein-losing enteropathy and chronic diarrhoea. It is generally diagnosed before 3 years of age, rarely presenting in adolescence and early adulthood. Usual features are bipedal oedema, serosal effusion, fatigability, diarrhoea, recurrent infections. Differential diagnoses include constrictive pericarditis, Crohn's disease, intestinal tuberculosis, sarcoidosis and intestinal lymphoma. The gold standard for diagnosis is by histopathology of intestinal mucosa showing multiple dilated lacteals. Here we report a case of intestinal lymphangiectasia with a typical presentation like PLE and recurrent bacterial and fungal infection.

Methods On careful history elicitation and clinical examination, our patient was a 19-year-old male student, a resident of rural West Bengal, born of non-consanguineous parents, with chief complaints of bipedal swelling without oliguria and chronic small bowel type non-bloody diarrhoea since 5 years of age. Recurrent lower respiratory tract infections are leading to recurrent hospitalizations since his 1 month of age. No past history or contact with tuberculosis. He was short stature with BMI of 16, no peripheral lymphadenopathy or organomegaly.

Abstract IDDF2018-ABS-0262 Figure 1

He had sparse pubic and axillary hairs, small testes and inadequate phallus size. He had adequate cognitive skills with 30/30 mini-mental status, completed secondary-school but had poor scholastic performance compared to peers and siblings. There were extensive onychomycosis in all 4 limbs.

Results Stool microscopy and culture were normal. Blood investigations showed both albumin and globulin <2 mg/dl on repeated occasions. His 24 hour urinary protein excretion was negative. Echocardiography, colonoscopy, skiagrams and abdominal sonogram were normal. Contrast-enhanced CT abdomen showed diffuse gut wall oedema. Histopathology from endoscopic duodenal mucosal biopsy showed multiple dilated lacteals in submucosa containing lymph, suggestive of intestinal lymphangiectasia. The patient was put on a diet containing medium chain fatty acid (coconut oil) and high protein content. He improved and gained weight with remission of diarrhoea, and oedema in subsequent follow up for next six months.

Conclusions In unexplained cases of GI symptoms, anasarca with a decrease in both albumin and globulin, endoscopic biopsy of intestinal mucosa can help in diagnosis.

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AGGRESSIVE MULTIMODALITY THERAPY IN EXTRA GASTROINTESTINAL STROMAL TUMOUR CAN HAVE PROLONGED SURVIVAL; A CASE REPORT

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Background Extra Gastrointestinal Stromal Tumour (EGIST) is a rare clinical entity with aggressive biological behaviour. Only few case reports have been published in the literature. We present a case of malignant EGIST who have prolonged survival with multimodality therapy involving surgery and targeted therapy.

Methods A 39 year female presented to our outpatient department in May 2016 with complaints of pain in the abdomen. The patient had a history of laparotomy in 2011 for a benign ovarian cyst. Eighteen months later She was diagnosed as a case of GIST and was on treatment with imatinib 400 mg/day. The patient was asymptomatic until in 2016 she developed pain abdomen. On clinical examination, there were palpable lumps involving umbilical and right iliac fossa. CECT showed a heterogeneous complex cystic mass in pelvis along with multiple omental and parietal wall nodules. The core biopsy suggested Malignant GIST positive for CD117, SMA and vimentin. CD34 was negative and Ki 67 was 60%. The patient was given Imatinib at a dose of 800 mg/day in divided doses. After five months of treatment, the patient had a good response but had intermittent lower abdominal cramps for which she was planned for surgery. Total Abdominal Hysterectomy with bilateral salpingo-oophorectomy, omentectomy and peritonectomy was done. Surgical recovery was good, and the patient was given imatinib 800 mg/day.

Results Post surgery histopathology also suggested Malignant Extra intestinal GIST with IHC similar to the core biopsy. The patient was compliant with therapy, and there was no comorbidity till the last follow update in February 2018. Post surgery patient was disease free for fourteen months and overall 61 months from the initial diagnosis.