Conclusion These data came to demonstrate that even in cases in which mild forms of COVID-19 infections have been reported, extended surgical procedures such as pelvic exenteration might be associated with a higher risk of perioperative complications.

2022-RA-452-ESGO AUTOMATIC SEMANTIC SEGMENTATION OF CERVICAL CANCER BASED ON DYNAMIC CONTRAST-ENHANCED MRI AND FULLY CONVOLUTIONAL NETWORKS

[1,2]Shaojun Xia, [1]Hai-Tao ZHU, [1]Bo Zhao, [1]Kun Cao, [1]Xiao-ting Li, [1]Ying-Shi Sun. *[1]Peking University Cancer Hospital and Institute, Beijing, China*; *[2]Institute of Medical Technology, Peking University Health Science Center, Beijing, China*

10.1136/ijgc-2022-ESGO.28

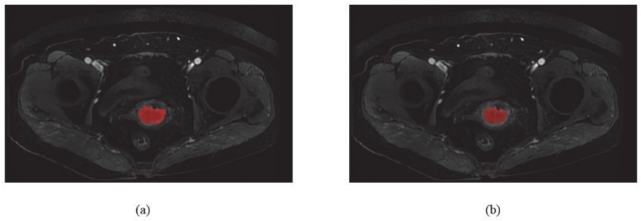
Introduction/Background In cervical cancer diagnosis, dynamic contrast-enhanced magnetic resonance imaging can reflect the access and distribution of blood vessels and tissues and has a certain effect on the evaluation of microvessels in tumors. This work developed and evaluated segmentation potential on DCE-MRI by fully convolutional networks, with aims to provide a clinical auto-delineation tool for subsequent radiotherapy.

Methodology Ninety contrast-enhanced MRI images of patients with cervical cancer were retrospectively enrolled. Sixteen patients did not participate in the model building process in order to verify the generalization ability. Totally 446 slices (512×512) with tumors were annotated by radiologists, among that 358 slices were used for training and 88 slices for testing (figure 1). A symmetric eight-layer deep networks were developed by the nnU-Net framework and the channel dimension was 32, 64, 128, 256, 480, 480, 480, 480, respectively. In addition, the training epoch was 1000 with a random 20% validation set(Initial lr=0.001, optimizer: SGD).

Results Dice similarity coefficient(DSC), 95% Hausdorff distance(95% HD) and average surface distance(ASD) were applied to evaluate the segmentation performance (table 1). The average DSC of all slices was 0.77(median 0.83, maximum 0.95). The average 95% HD was 5.92 mm(median 3.56) and the average ASD was 0.88 mm(median 0.12). 14 of 16 patients' average DSC exceeded 0.70 and average ASD were less than 1.2 mm. Meanwhile, 10 of 16 patients' average 95% HD were less than 5 mm.

Abstract 2022-RA-452-ESGO Table 1 Metrics (DSC, 95% HD, ASD) for gold standard and prediction results

Test ID	Tumor slices	AVG DSC	AVG 95% HD/mm	AVG ASD/mm
01	5	0.802398368	2.648528137	0.579955255
02	3	0.764765663	5.086088807	1.279313715
03	4	0.363191069	25.26658809	9.701525509
04	5	0.711299688	6.403639159	0.017534851
05	8	0.88574211	1.904508497	0.034909396
06	9	0.889465772	1.765149946	0.226110052
07	3	0.702562242	12.27649239	2.970711753
08	4	0.907961407	1.721587379	0.071985359
09	4	0.737839035	4.559016994	0.539111346
10	5	0.470104588	18.68421224	0.038117909
11	6	0.906675022	2.178511302	0.115151111
12	8	0.742710676	4.217750087	0.268539644
13	4	0.86889953	1.75	0.530898862
14	5	0.80668309	4.894427191	0.94316297
15	10	0.796706816	5.861343668	0.002822834
16	5	0.756411195	7.174376602	1.590445087
Total test tumor slices	88	0.773726876	5.918765372	0.876726805



Abstract 2022-RA-452-ESGO Figure 1 Contrast-enhanced MRI images (a) cervical tumor area delineated by radiologists (b) cervical tumor area segmented by deep learning model

Conclusion This experimental result indicates that the tumor of cervical cancer on dynamic contrast-enhanced MRI images can be accurately segmented under small sampling, with a great application potential as assistant tool for real-time dynamic delineation. Deeper studies will be conducted by validating this model on a larger sample and enhancing the robustness of the model clinically.

2022-RA-566-ESGO COST-EFFECTIVENESS OF CERVICAL CANCER SCRENNING STRATEGIES AMONG WOMEN IN CAMEROON

[1,2]Jessica Sormani, [1]Ania Wisniak, [3,4]Bruno Kenfack, [3]Alida Moukam Datchoua, [5]Pierre Vassilakos, [1]Patrick Petignat, [1]Christophe Combescure. *[1]Geneva University Hospitals, Geneva, Switzerland*; *[2]School of Health Sciences, HES-SO University of Applied Sciences and Arts Western Switzerland, Geneva, Switzerland*; *[3]District Hospital of Dschang, Dschang, Cameroon*; *[4]Faculty of Medicine and Pharmaceutical Sciences, Dschang, Cameroon*; *[5]Geneva Foundation for Medical Education and Research, Geneva, Switzerland*

10.1136/ijgc-2022-ESGO.29

Introduction/Background Sub-Saharan Africa has the highest cervical cancer burden worldwide. Before implementing a cervical cancer screening programme, National authorities and decision-makers need to balance the benefits and costs of context-sensitive solutions. Our aim was to assess the cost-effectiveness of two cervical cancer screening strategies in Cameroon: i) HPV self-testing (Self-HPV), and (ii) Self-HPV and triage with Visual Inspection with Acid acetic (VIA) (Self-HPV/VIA) at frequencies twice to seven times between 30 and 60 years, at 5 or 10-year intervals.

Methodology A lifetime decision-analytic model has been calibrated to Cameroonian women. Costs parameters have been estimated based on real-life screening activities within the 3T-project in Cameroon. Utilities were accounted for in the model. Cost-effectiveness ratios have been assessed for each strategy and screening frequency compared with the absence of strategy.

Results Four combinations appeared to be the most cost-effective: Self-HPV/VIA at 35–45, and at 30–40–50 years, and Self-HPV every 5 and 10 years between 30 and 60 years old. The incremental cost per QALY gained for Self-HPV/VIA strategies was 403USD (393–413) at 35–45 years, and 690USD (671–708) at 30–40–50 years, 1035USD (1005–1057) for Self-HPV at 30–40–50–60 years, and 1592USD (1553–1620) at 30–35–40–45–50–55–60 years. Cervical cancer mortality was mostly lower with Self-HPV strategies.