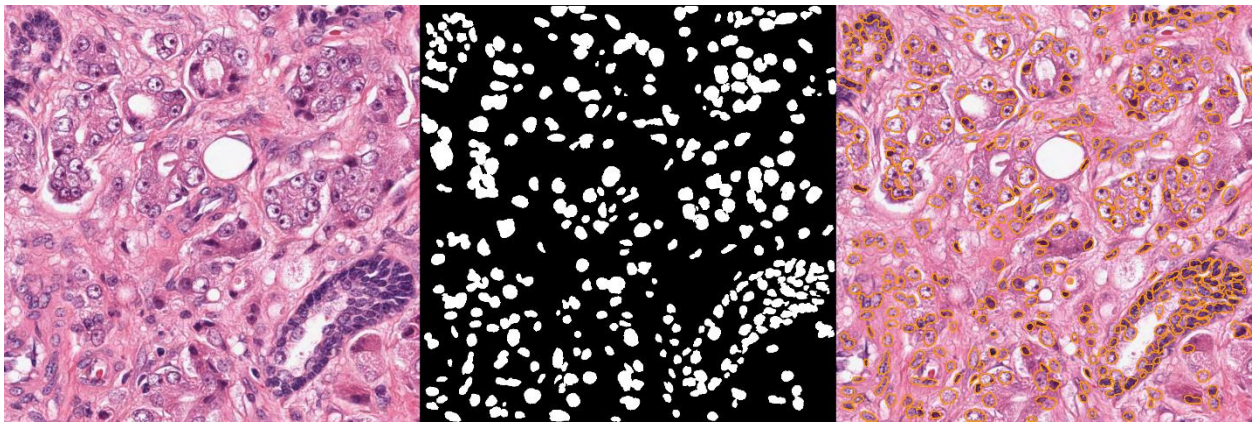


Nuclei Segmentation Workflow

The analysis and interpretation of stained tumour cells is one of the main tools in cancer (such as cervical cancer) diagnosis, which is mainly carried out manually by pathologists. Identification of nuclei in the cells is the starting point for most analyses as most of the human body's 30 trillion cells contain a nucleus full of DNA. Identification of these nuclei allow the researchers to identify each individual cell in a sample, and by measuring how cells react to various treatments, the researcher can understand the underlying biological processes. Methods for assessing nucleus size and shape typically involve identifying the nucleus via traditional image segmentation approaches. We have created a workflow based on Deep Learning Technique to segment nuclei from native RGB image. We trained our model over varied images of nuclei, to make our model robust to several degrees augmentation. The training of the model was performed on **Google Colab**, *Google's free cloud service for AI developers*.



(Result from Nuclei Segmentation Workflow - Left image is original image; Middle image is results of segmentation and Right image in contour overlaid on original image)