Kasetsart University
Department of Computer Science

Lab 6 Cell Nuclei Segmentation
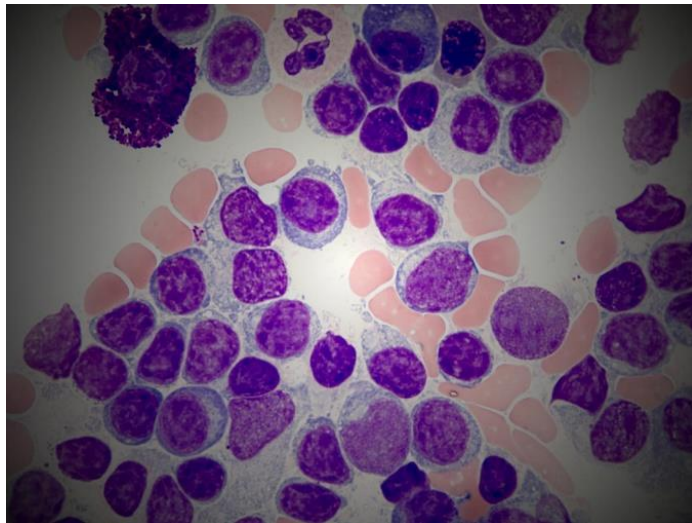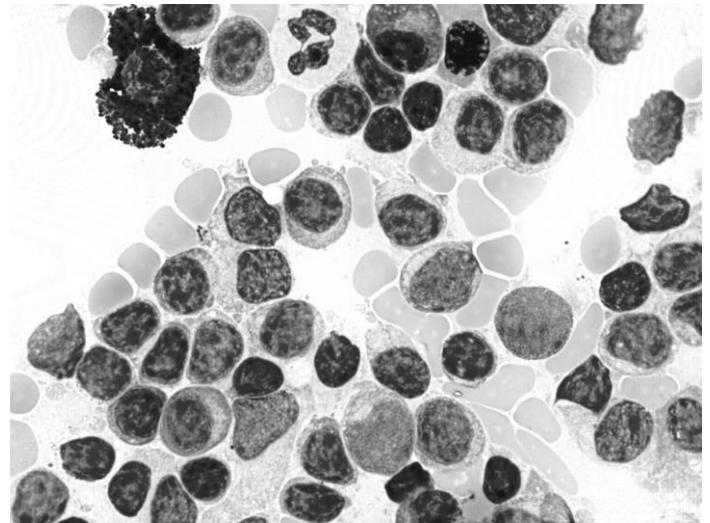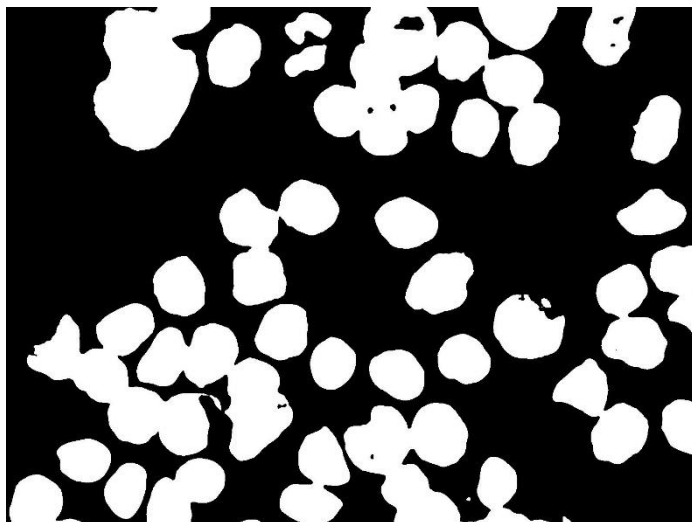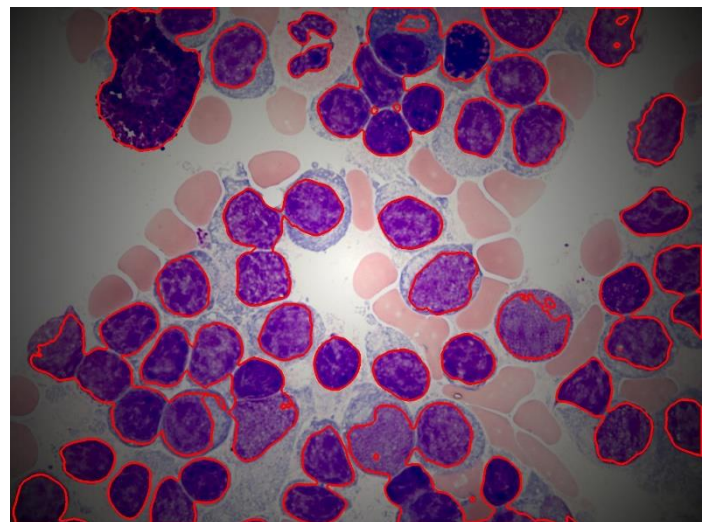Asst.Prof. Dr. Pakaket Wattuya

Cell Nuclei Segmentation in Microscopic histologic images

Input image

Shade correction (Flat-field correction)

Thresholding and convert black to white
(im_bw = ~im_bw)

Segmentation result superimpose on original image
(drawBoundary.m)

MATLAB functions	Example
I = rgb2gray(RGB)	Convert the truecolor image RGB to the grayscale intensity image
~A	Logical NOT for symbolic expressions
Thresholding Operator:	
level = graythresh(I)	Global image threshold using **Otsu's method**
BW = imbinarize(I, level)	Convert image to binary image, based on **threshold**

Reference

Wright-Giemsa stained bone marrow aspirate smear showed increased lymphoid cells with slightly eccentrically located round to oval nuclei, condensed chromatin, inconspicuous nucleoli and a certain amount of amphophilic cytoplasm. Scattered plasma cells are identified associated with few reactive mast cells (Wright-Giemsa). Contributed by Ling Zhang, M.D.

Bridgelall S, Zhang L. Lymphoplasmacytic lymphoma. PathologyOutlines.com website. https://www.pathologyoutlines.com/topic/lymphomalpl.html. Accessed January 9th, 2021.