

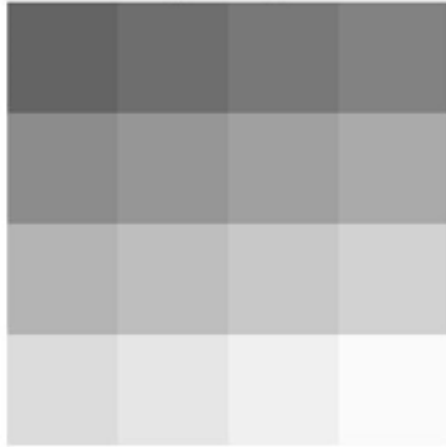
Exercício de Segmentação

Segmentação com o Método de Otsu



Segmentação: Método de Otsu

Imagem Original

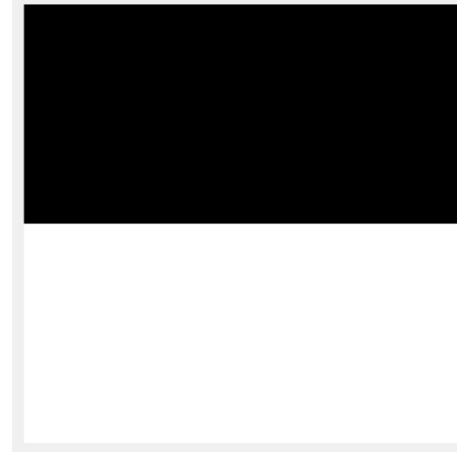


$T = 174$

$T = 127$



Imagem Segmentada por Otsu



Gradiente da Imagem Segmentada por Otsu

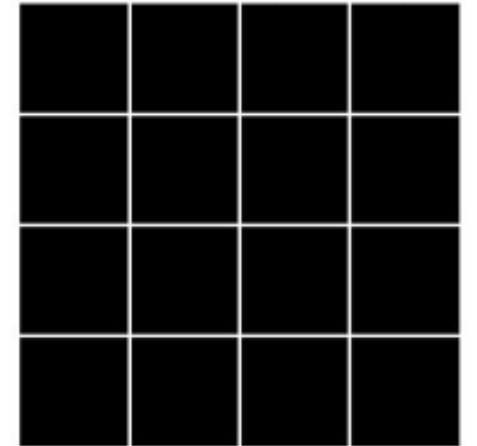
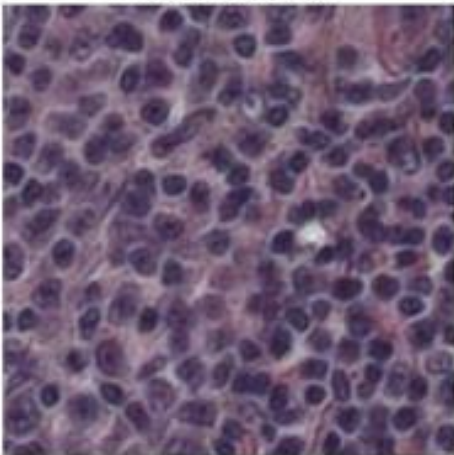


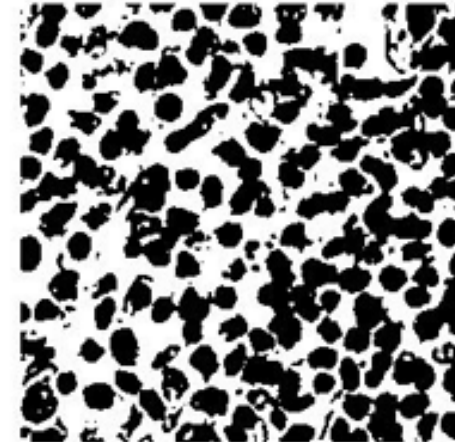
Imagem Original



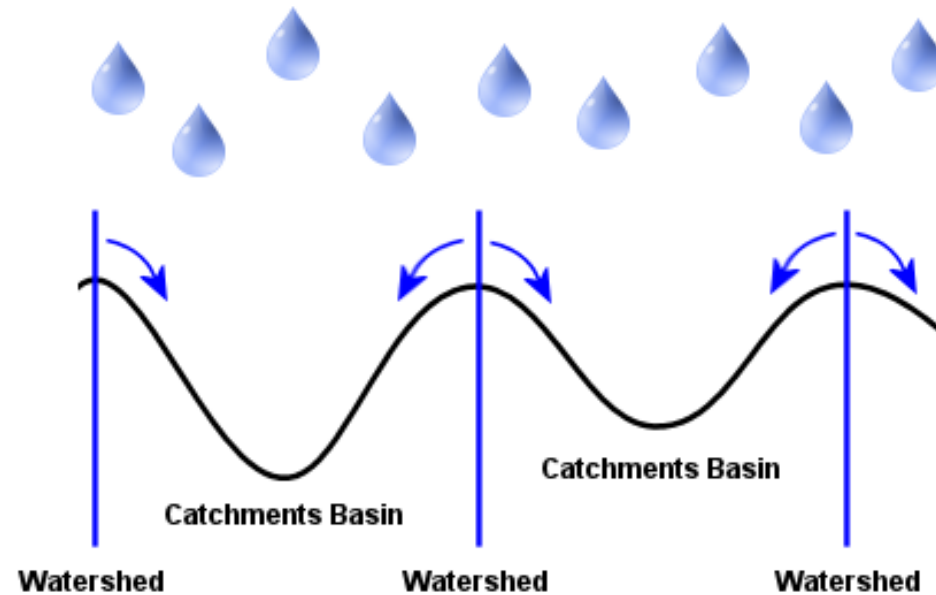
$T = 97$



Imagem Segmentada por Otsu



Segmentação com Watershed



Segmentação: Watershed usando Gradiente

Imagem Original

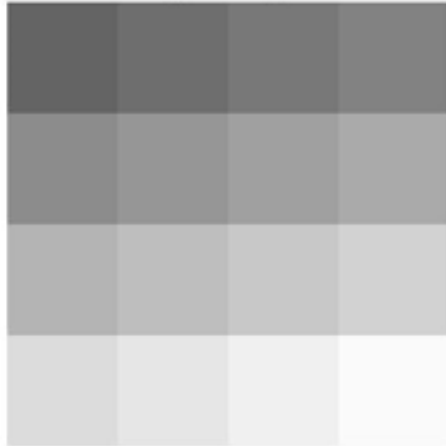


Imagem Segmentada por Watershed sem Marcadores

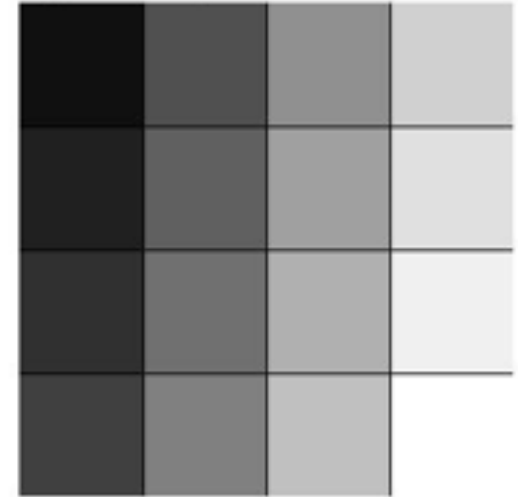
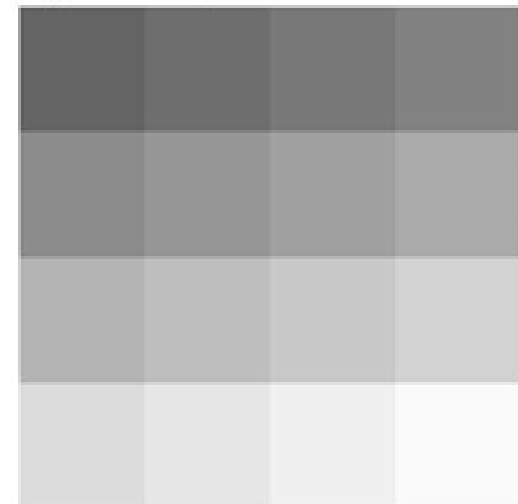


Imagem Segmentada por Watershed com Marcadores



Segmentação: Watershed usando Gradiente

Imagem Original

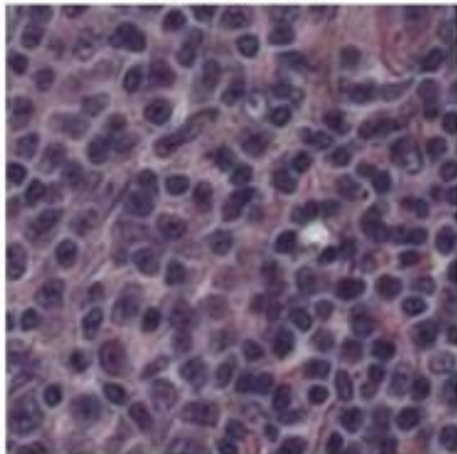


Imagem Segmentada por Watershed sem Marcadores

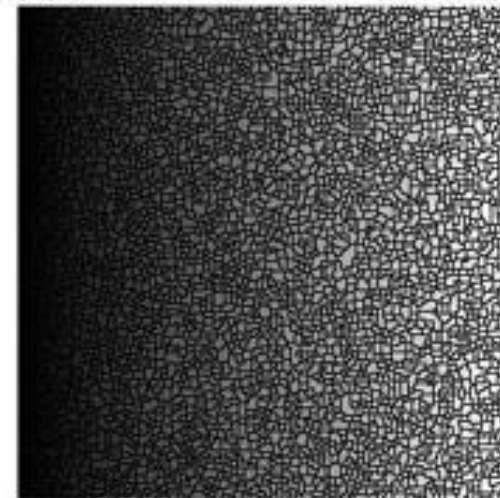
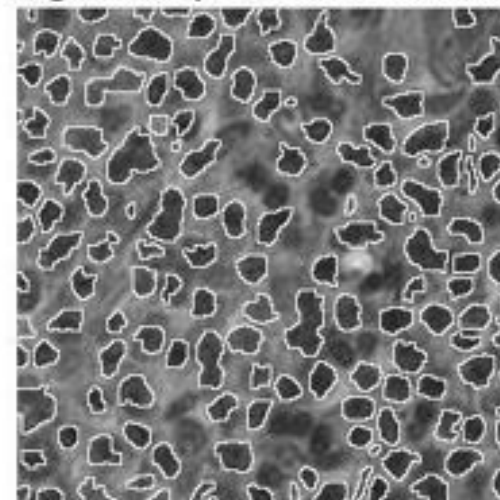
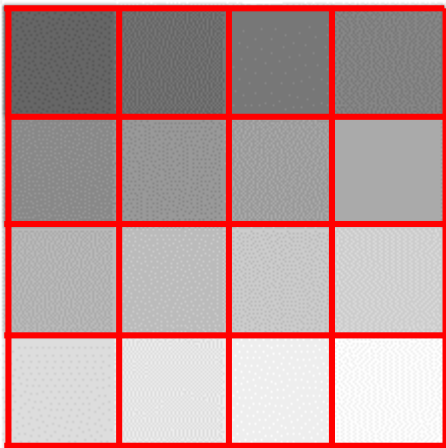
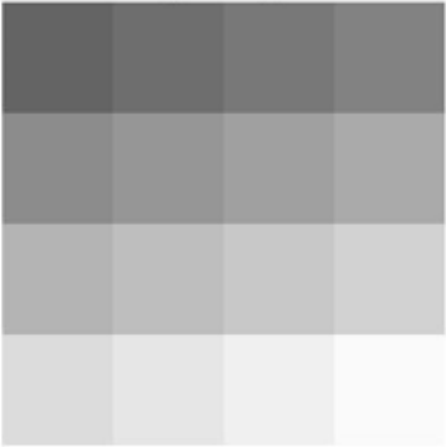


Imagem Segmentada por Watershed com Marcadores



Desempenho: Imagem 1

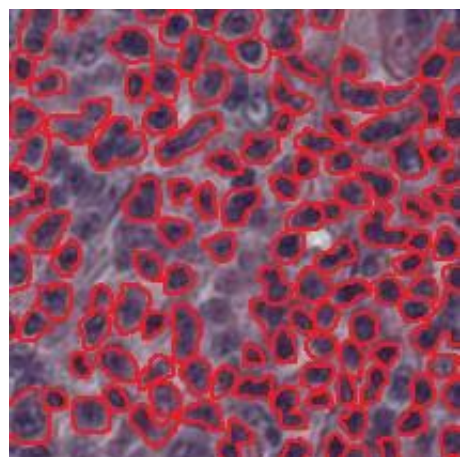
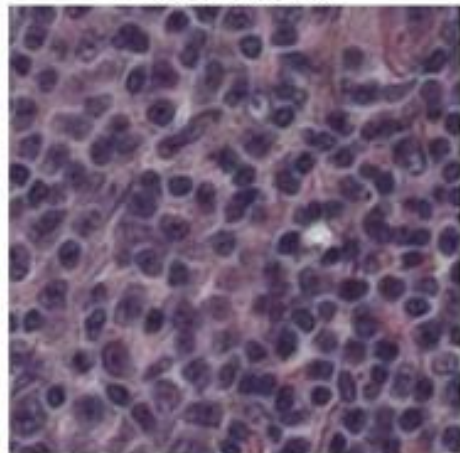
Imagem Original



%	Sensibilidade	Especificidade
Otsu	0	0
Otsu (Gradiente)	100	100
Watershed sem Marcadores	100	100
Watershed com Marcadores	0	0

Desempenho: Imagem 2

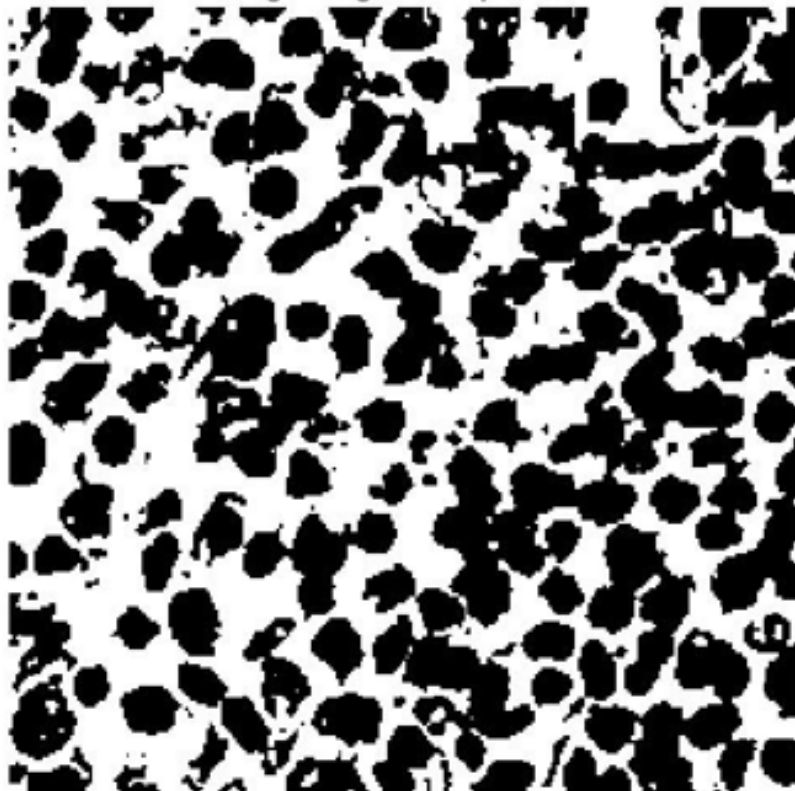
Imagem Original



%	Sensibilidade	Especificidade
Otsu	85	70
Watershed sem Marcadores	80	5
Watershed com Marcadores	65	60

Morfologia após Segmentação

Imagem Segmentada por Otsu



Filtro Morfológico

Abertura

+

Fechamento

Imagem após Filtro Morfológico (A+F)

