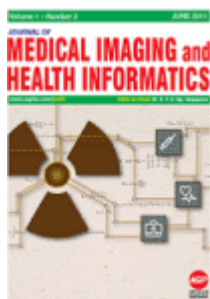


 THIS PAGE IS SECURE


An Experimental Research in Health Informatics for Enhancing Ovarian Cancer Identification in Ovarian Imaging Analysis Using Fuzzy Histogram Equalization

Buy Article:

\$106.23 + tax

(Refund Policy)

ADD TO CART

BUY NOW

Authors: Ahmad, Muneer; Zaman, Noor; Al-Amin, Muhammad**Source:** Journal of Medical Imaging and Health Informatics, Volume 7, Number 6, October 2017, pp. 1385-1390(6)**Publisher:** American Scientific Publishers**DOI:** <https://doi.org/10.1166/jmih.2017.2218>

Abstract



References



Citations



Supplementary Data



Article Media



Metrics



Suggestions

Ovarian cancer is considered as one of the major reason of death in females. Many times, ovarian cancer images are unclear and are contaminated by image noise due to malfunctioning of imaging equipment. Suppression of image noise greatly helps practitioners for a better advice to their patients. This research presents an experimental research in health informatics to significantly improve the contrast of the image by proposing a new fuzzy histogram equalization technique based on the fuzzy normalized histogram of image. Each element of fuzzy set has some membership degree determined by S-shaped membership function. The algorithm enhances the contrast of the image by constructing the fuzzy image and calculating the fuzzy histogram. The fuzzy histogram is transformed to the gray level for all the pixels in image. The effectiveness of the proposed algorithm has been justified over several experiments on different sets of images: (i) MRI images (ii) CT scan images and (iii) ultra-sound images. The algorithm attains a significant enhancement from 20% to 35% in ovarian cancer identification as compared to other conventional image processing solutions.

Keywords: DIGITAL SIGNAL PROCESSING; FUZZY LOGIC; IMAGE ENHANCEMENT; OVARIAN CANCER

Document Type: Research Article

Publication date: October 1, 2017

[More about this publication?](#)

