

# EVALUATION OF PATIENT DOSE IN SOME MAMMOGRAPHY IN IRAN

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# INTRUDUCTION

early detection of breast cancer with  
Mammography

Because:

- 1- High diagnostic sensitivity
- 2- specificity
- 3-the least dose to the patient

# PURPOSE

evaluate of patient dose and image quality  
of mammograms.

# METHOD AND MATERIAL

1-select 8 hospitals

2- collecting basic information in relation to:

- Respecting the principles of protection
- Specifications of system
- Profile of patient irradiation conditions from all the centers

3-sending of image quality criteria form to all the centers

4-measurment:

- Evaluation of image quality
- Entrance Surface Air Kerma (ESAK)
- Average Glandular Dose (AGD)
- Optical Density (OD) of films

with standard breast phantom 4.5cm thickness were evaluated.

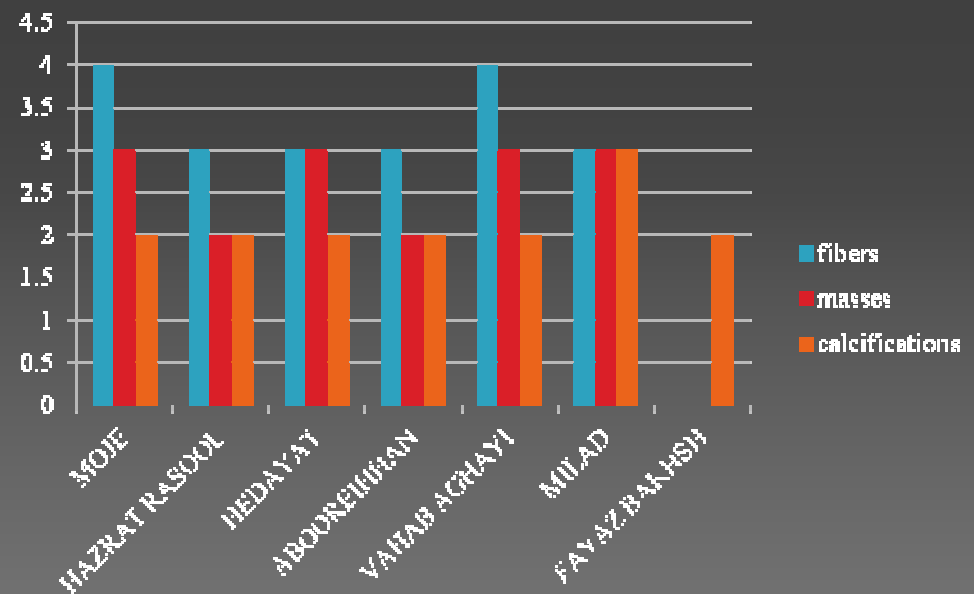
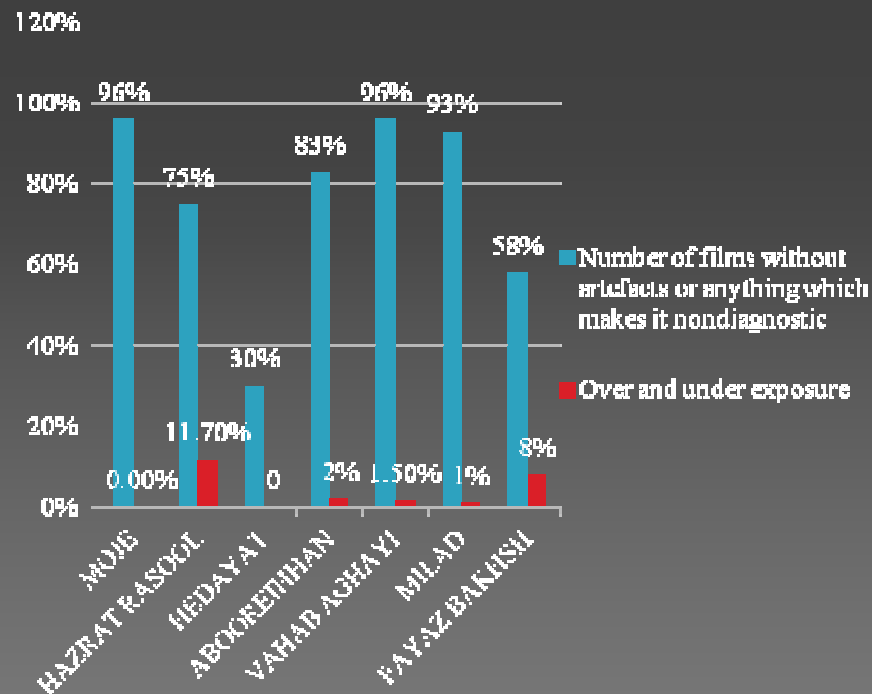
# RESULTS

- 72% of mammograms (CC and MLO) in good conditions diagnostic
- 3.38 % of images unacceptable or with suboptimal quality
- ESAK : 5.5-24.6 mGy
- AGD: 0.54-1.79 mGy
- OD of films: 0.74-2.03

# RESULTS(CONT)

Comparison films accepted and unaccepted

Evaluation of image quality

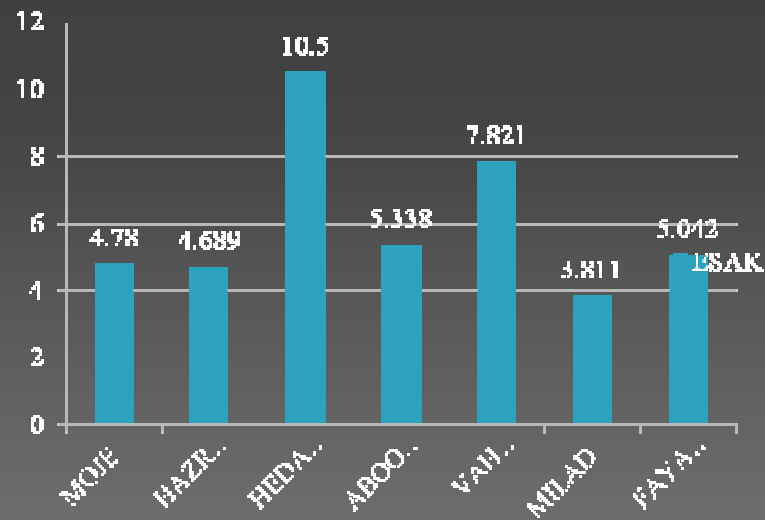


# RESULTS(CONT)

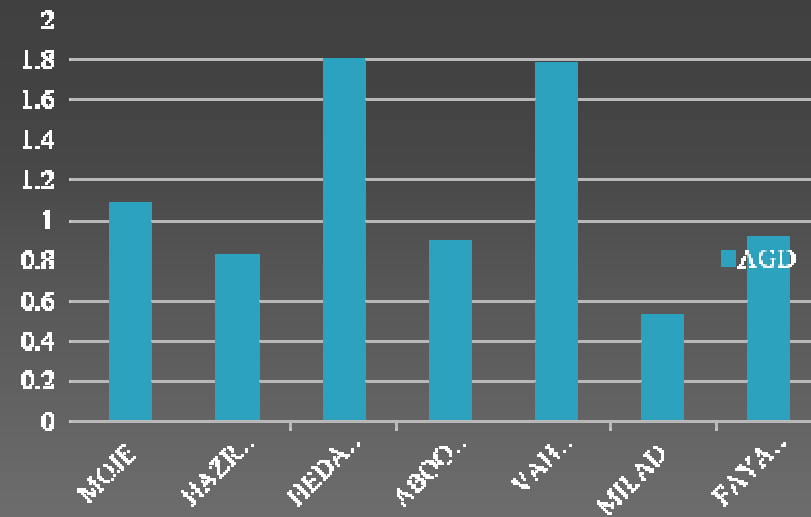
Entrance Surface Air Kerma (ESAK)

Average Glandular Dose (AGD)

## ESAK

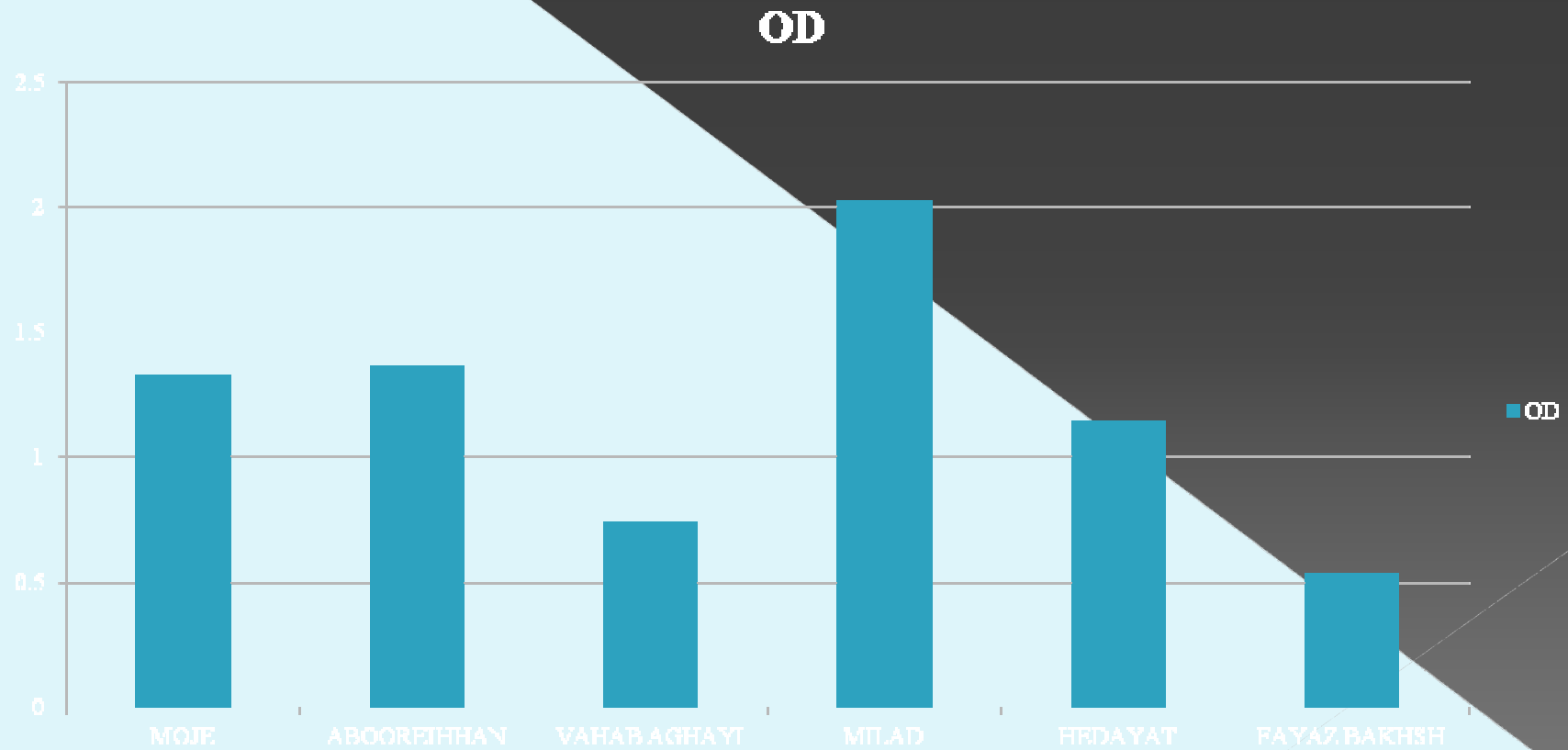


## AGD



# RESULTS(CONT)

## Optical Density (OD) of films





## RESULTS(CONT)

The repeated (after corrective actions) image quality evaluation certainly will improve image quality. The result of this part of project is in progress.

# CONCLUSION

The survey indicated that periodic image quality evaluation and using the correct equipment is essential for optimization of patient protection.