

Experiences with clinical audit in Slovak mammography departments

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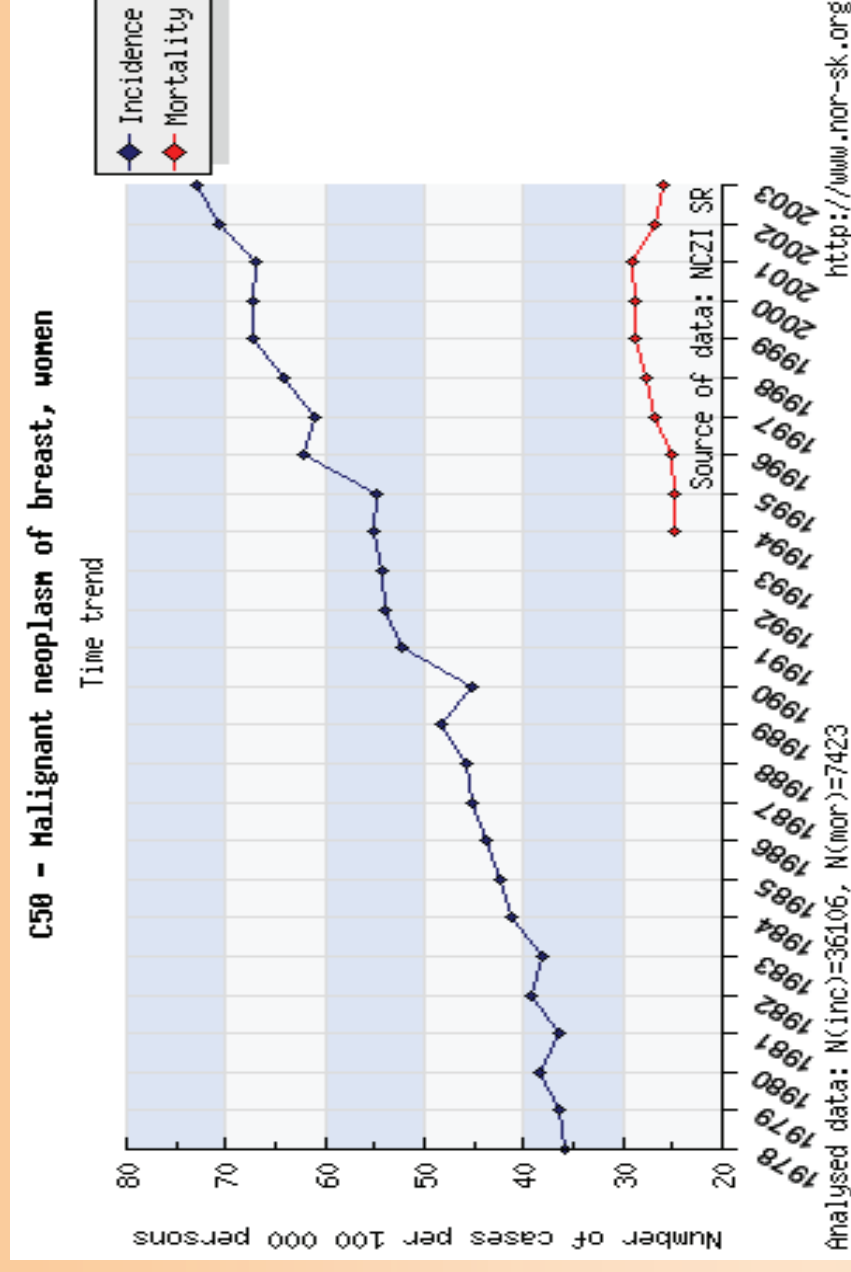
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Outline of the presentation

- Introduction
- Initiation of national mammography audit
- Performance of the audit
- Results of audit
- Conclusion

Introduction I

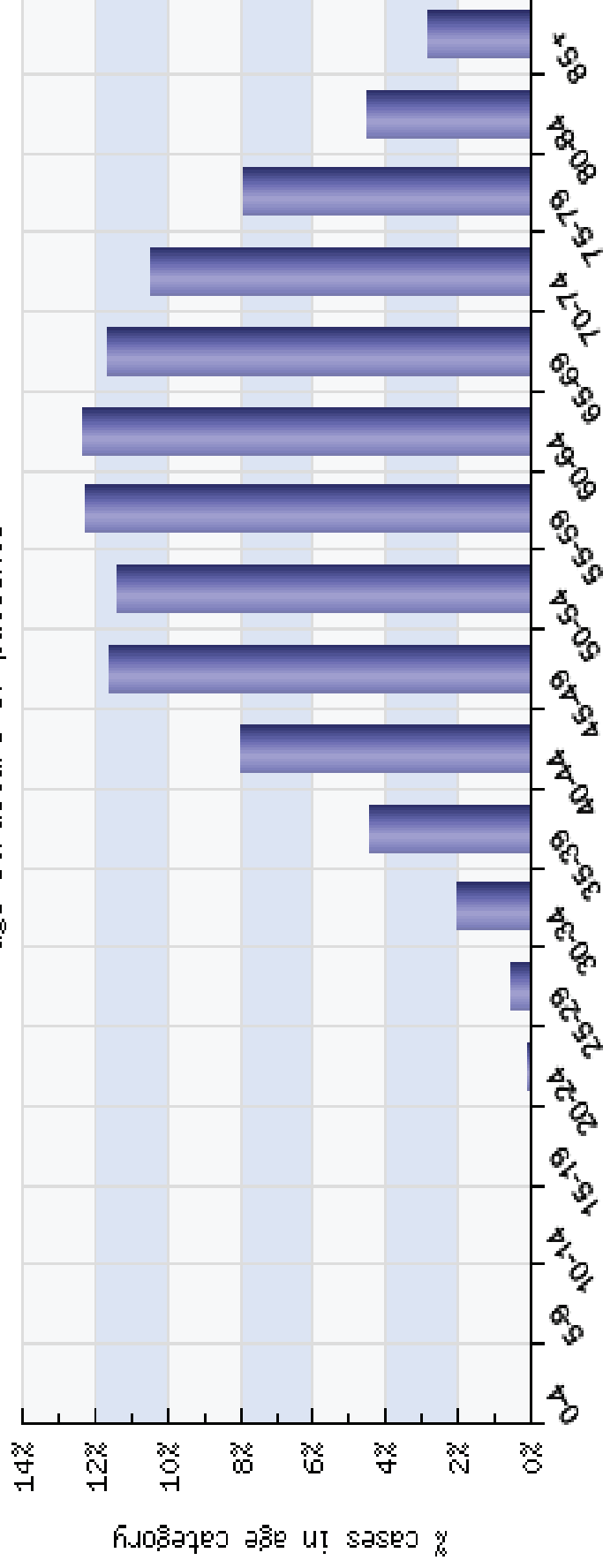
- Due to continuing increase of breast cancer incidence and mortality in Slovakia it was decided to lower this public health problem through systematic detection of cancer at earlier stages



Introduction II

- In Slovakia in 2003 there has been 1 303 336 women aged over 40 years having the right to regular mammographic preventive examination every two years (No. of provided mammographies was 271 755 per year)

C50,005 - Breast tumours - Incidence, women
age structure of patients



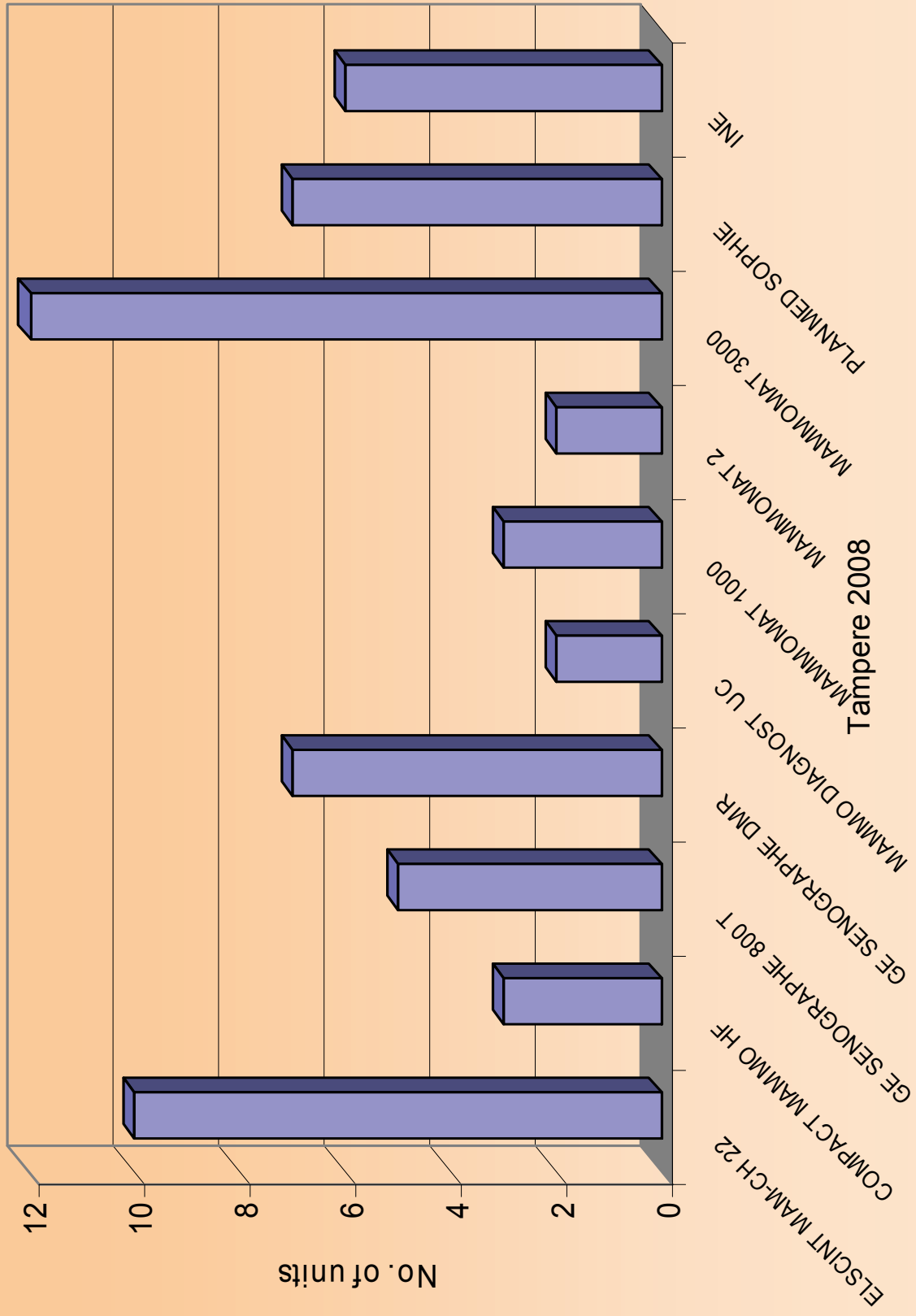
Initiation of national mammography audit

- For early breast cancer detection the implementation of QA/QC program has been initiated and a national mammography audit introduced
- On the national level participants of the audit were chosen in accordance with equipment performance for quality control program standardized

Performance of the audit

- Audit was performed in 58 departments (from total number of 80) in three runs and realized in three phases:
 1. Assessment of existing status of practice as well as education and training of radiologists and radiographers;
 2. Implementation of technical quality program, patient dose evaluation and clinical image evaluation;
 3. Analysis of data obtained during the audit and publication of general guidelines for QA/QC control in preventive mammography examinations

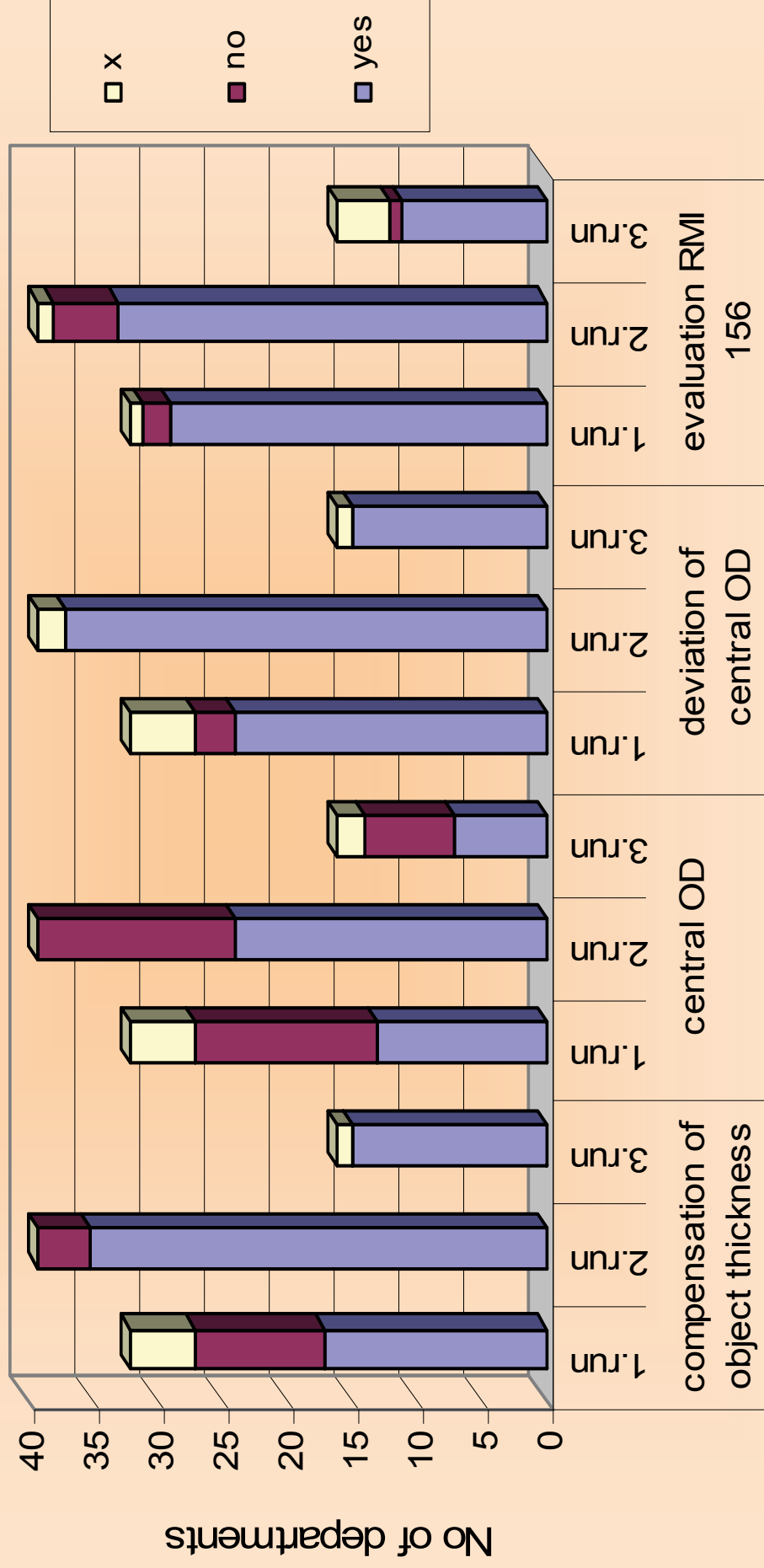
Types of mammography units in audit



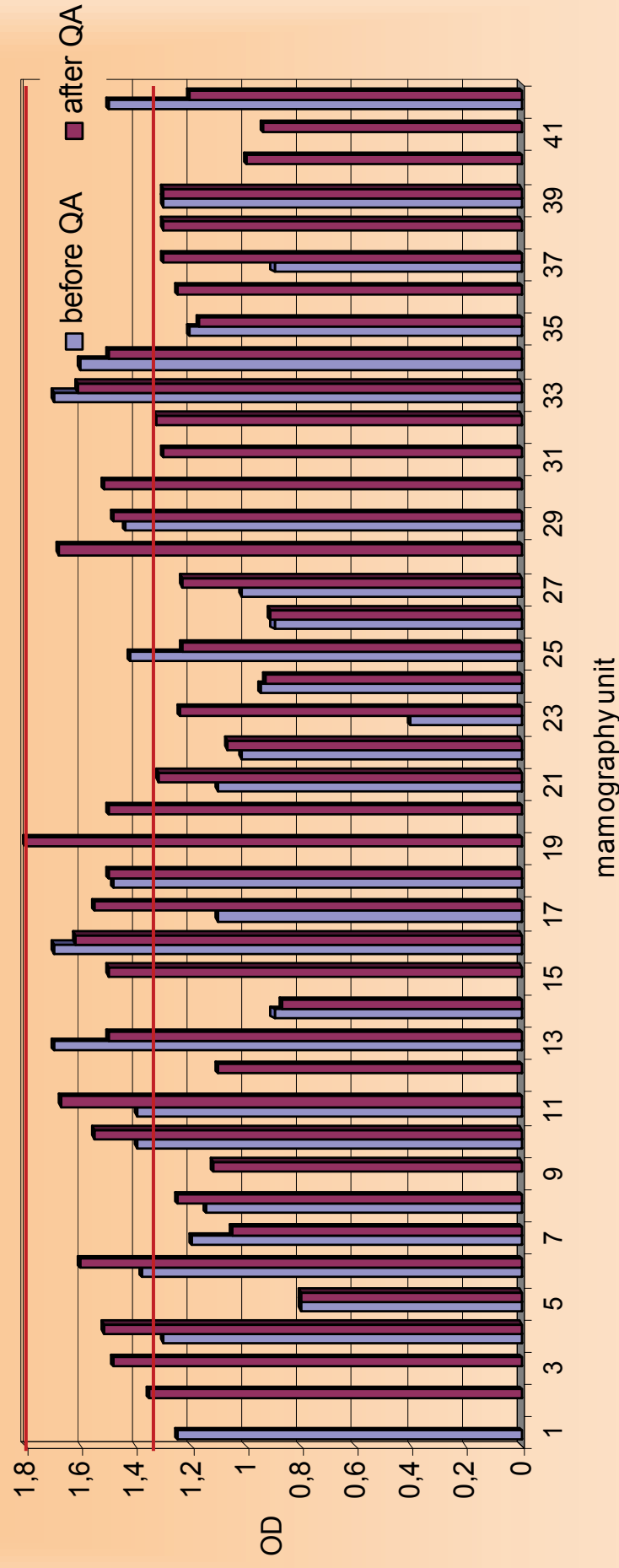
Surveyed results of the mammography audit

- object thickness compensation (measured weekly)
- long time reproducibility (measured daily)
- phantom image quality on the standard RMI 156 phantom (measured weekly)
- reject film analyses
- clinical image evaluation (4 images of 10 patients)
- dose measurement on phantom (once during the audit)

Results collected during 6 month period of every run of the quality audit

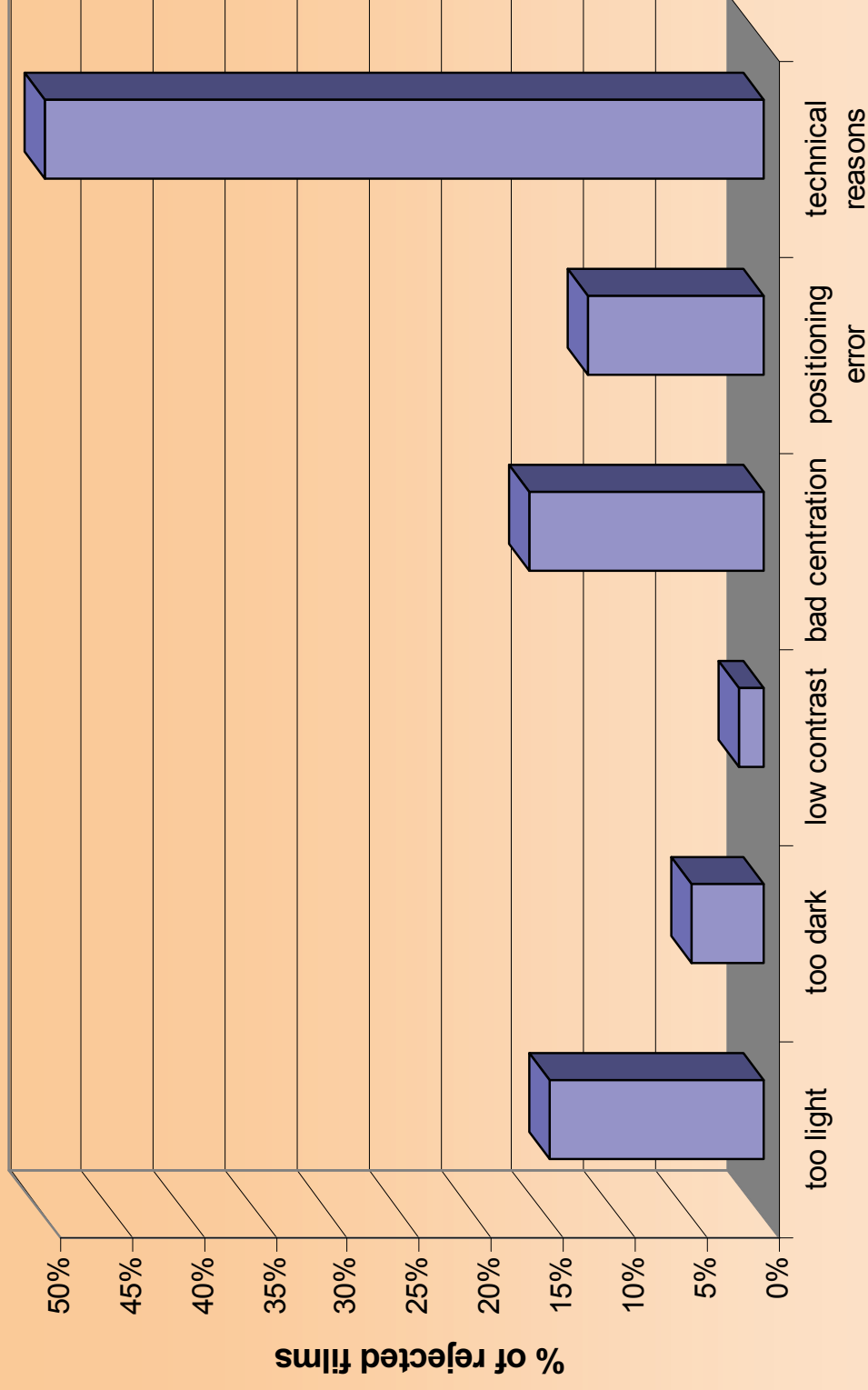


Central OD before and after QA implementation



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Film reject rate according to cause of rejection

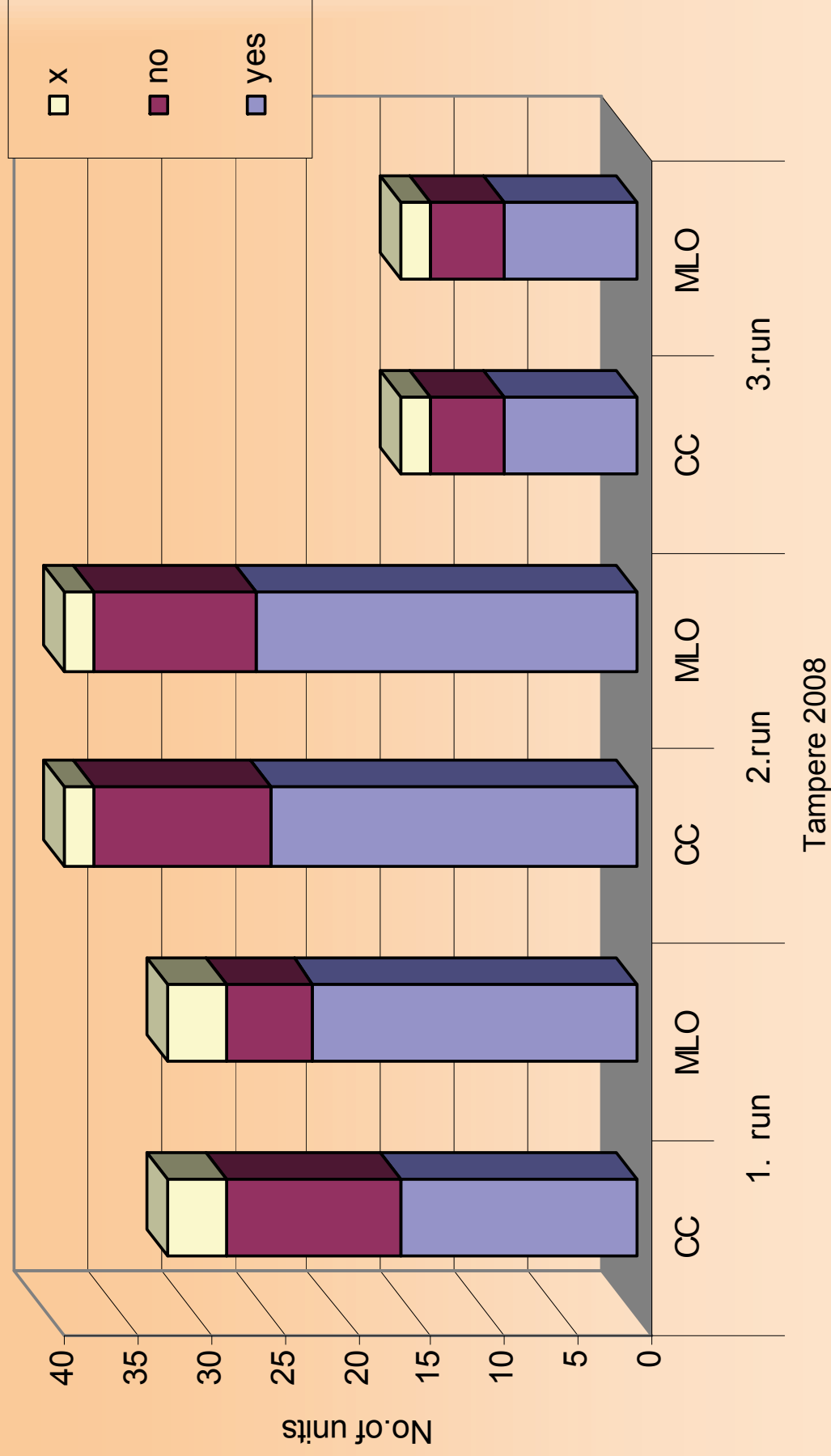


cause of rejection
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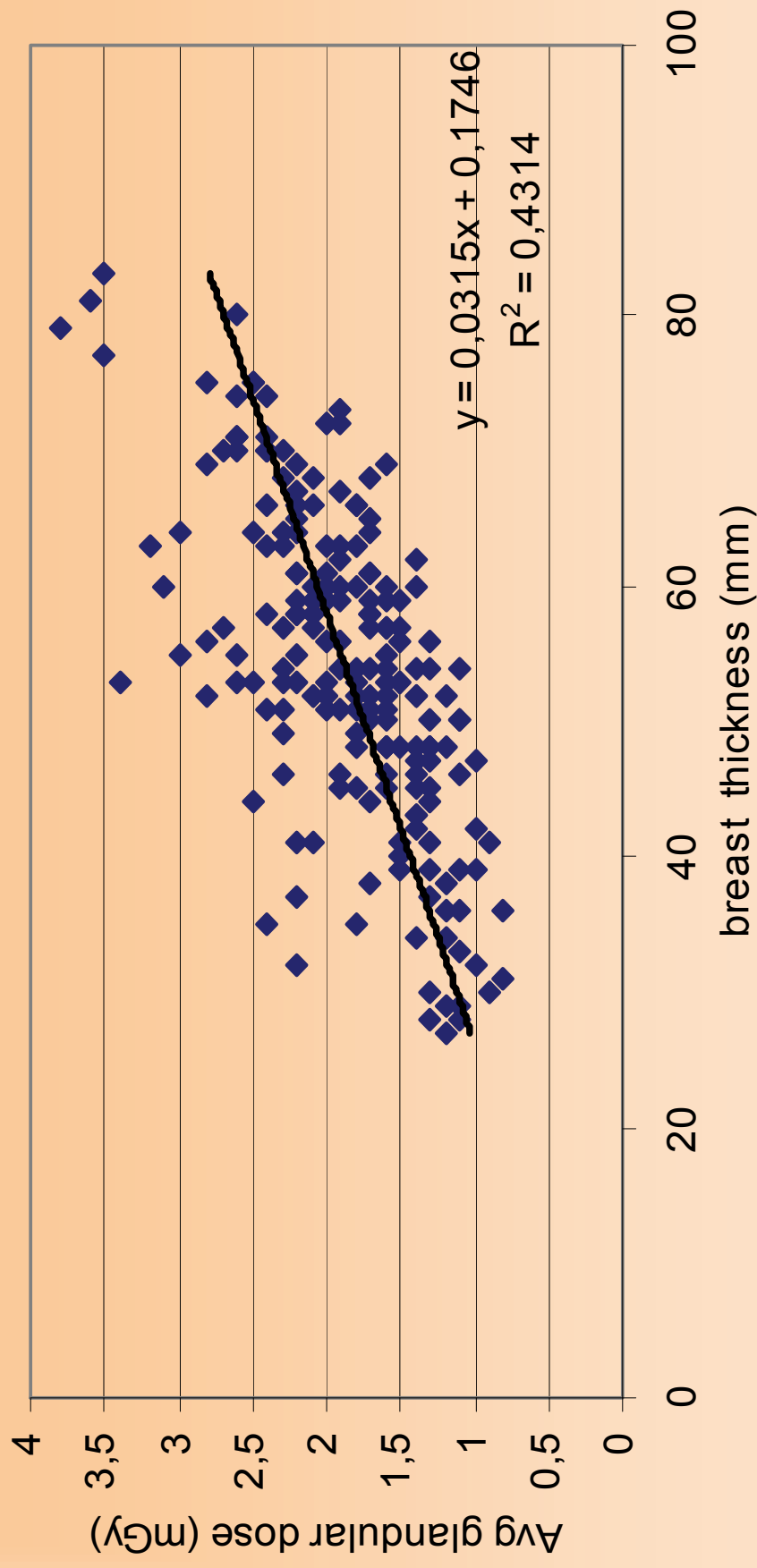
Analyses of the results - percentage of non-fulfilled criteria

	Object Thickness compensation	Long term reproducibility	Phantom image quality evaluation	Central OD
Before QA implementation	34,5%	10,3%	6,9%	48,3%
After QA implementation	4,5%	0	2,8%	41%

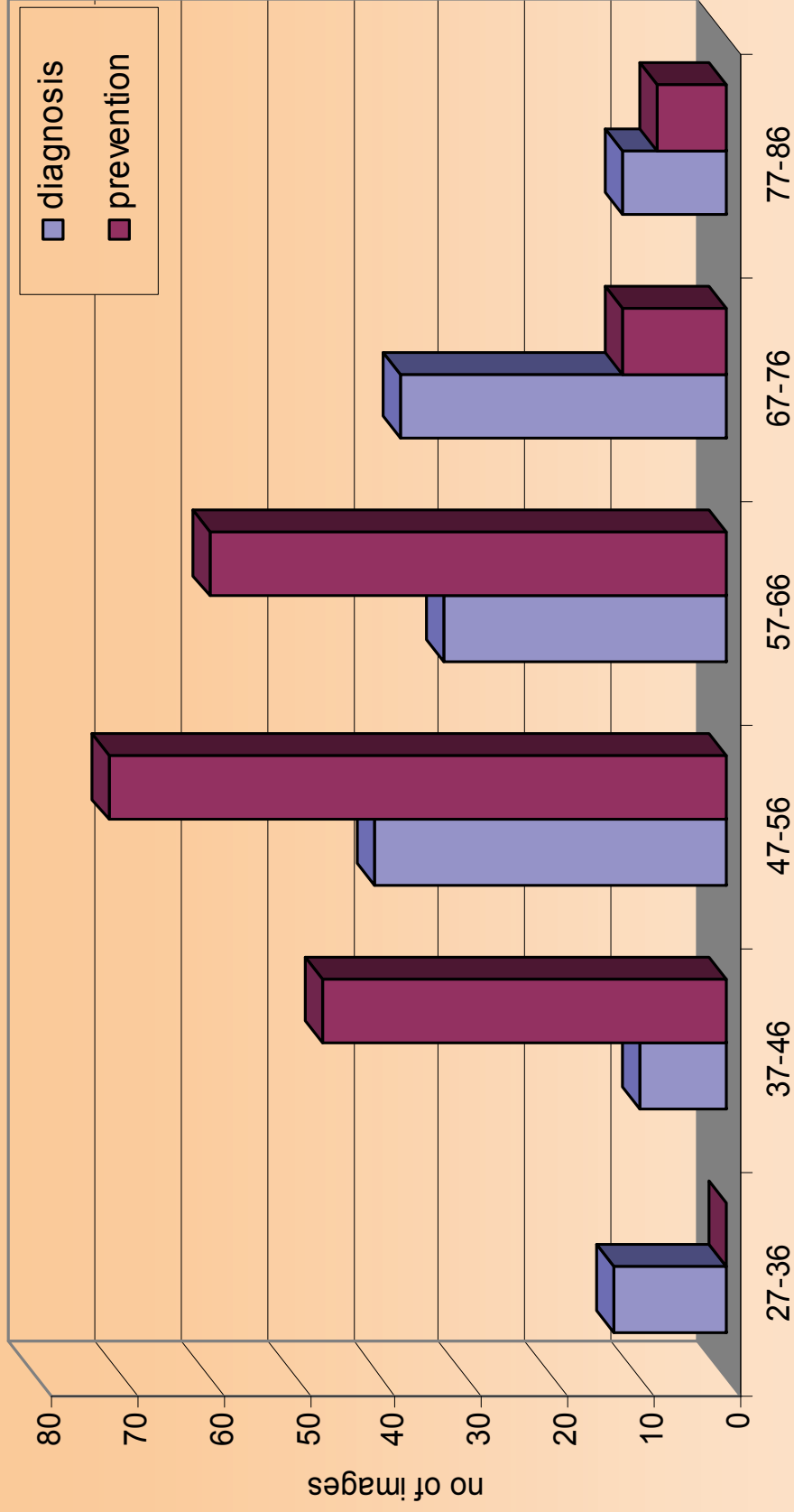
Image evaluation by auditors



Averaged glandular dose as a function of breast thickness



Age distribution of mammography patients

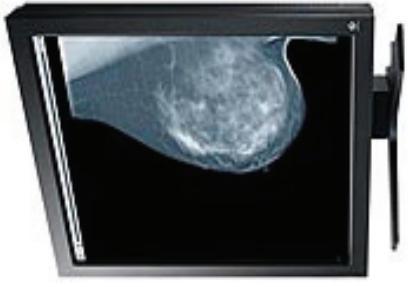


age of patients

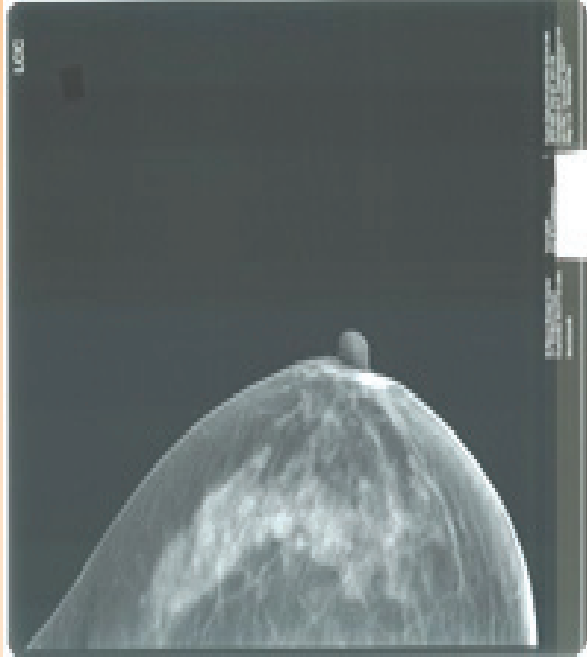
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Conclusions

- The Guidelines for standard procedure of quality assurance in preventive mammography was edited by the Slovak Ministry of Health (in 2005)
- The successful preventive mammography programme is gradually outgrowing to screening
- Using the third quartil of the glandular doses in breast of investigated women we could propose a national diagnostic reference level equal to 2,5 mGy, instead of until now used value of 3 mGy (the average thickness of the breast~ 6 cm)
- At present time Slovak Ministry of Health prepares a complex multidisciplinary regulation for mamma diagnosis and screening program with respecting of highest quality standards in all aspects



**Thank you
for your attention**



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