

External Quality Assessment schemes in Pathology in Portugal (PNAEQ-Labquality) 2013-2014



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BACKGROUND

Since 2001, the Portuguese external quality assessment program (PNAEQ) has been working with Labquality and a consortium of Investigation and Development was established in 2013.

In 2009, the Histopathology and Immunochemistry schemes were the first programs available in the area of Pathology. Clinical cytology and Technology schemes were introduced during the following years.

Initially, the number of participants was very low. Knowing that participation on EQAs programs allows monitoring of the laboratories' performance it was necessary to invest in the education of laboratory personnel to insure the competence of the laboratory's technicians and their ability to provide reliable and accurate results.

PNAEQ and Labquality and their Pathology Experts made efforts promoting awareness of these programs by organizing meetings in 2014 and 2015, for all the Portuguese Pathology laboratories with the collaboration of the College of Portuguese Pathologists.

These meetings were very successful since almost all of the 37 Portuguese pathology laboratories participated and a total of 41 participants were present.

The agenda was about the importance of Quality Control in general, EQA schemes as a way to compare one's own results with those of peers and finally to distribute information about the requirements for the accreditation of pathology laboratories.

Image 1: Photos of the Pathology meeting held on the 15th of January of 2015



SCHEME CHARACTERIZATION

Clinical cytology: Virtual images of Papanicolaou stained slides of gynaecological and non-gynaecological smears or fine needle biopsy sent in two rounds a year.

Histopathology: Virtual images of slides, prepared using a scanner microscope, of miscellaneous tissue, sent in two rounds a year.

Immunohistochemistry: Paraffin embedded tissue on 3-5 slides from different tissue blocks or from one multiblock, for antibody staining, sent two rounds a year.

Technology: Paraffin sections, smears or slides for staining, sent in two rounds a year.

METHODS

The performance of Portuguese Laboratories was evaluated for Histopathology since it is the schemes with higher number of participants. The percentage of correct and incorrect diagnosis was calculated for the two 2013 rounds and for the first round of 2014.

The scheme statistical evaluation and comments is performed by Labquality and the panel of Experts in the field.

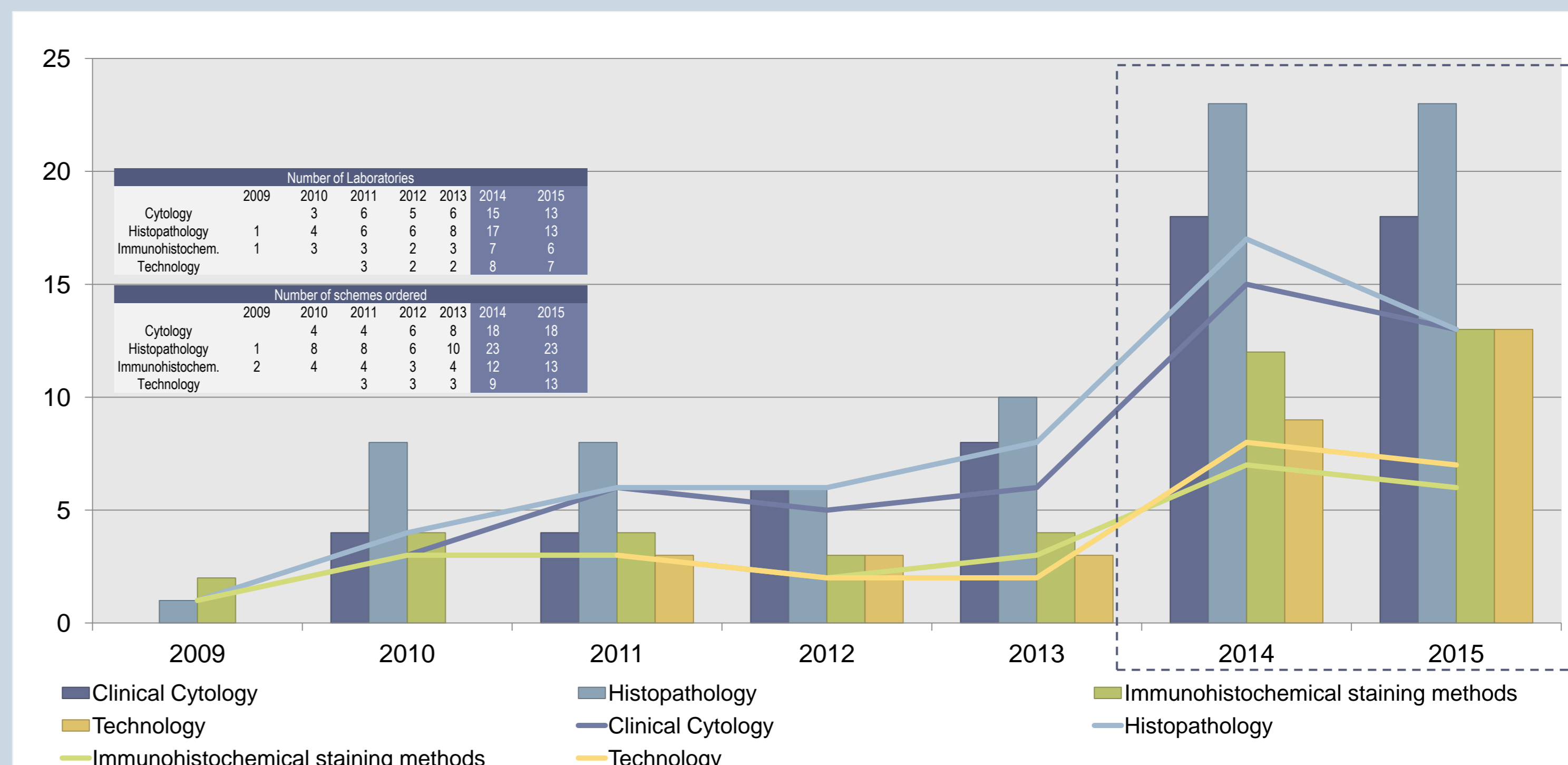
RESULTS AND DISCUSSION

Table 1: Percentage of correct diagnosis results of Portuguese Laboratories, Histopathology round. Round 1/2013 and 1/2014 – Routine Pathology; Round 2/2013 - Dermatopathology

| | Case | Correct Portuguese diagnosis | Overall correct diagnosis according to reference |
|--------------------------|------|------------------------------|--|
| 1/2013 Routine Pathology | 1 | 100 | 93,8 |
| | 2 | 75 | 56,9 |
| | 3 | 75 | 55,4 |
| | 4 | 75 | 56,9 |
| | 5 | 100 | 95,4 |
| | 6 | 75 | 96,9 |
| | 7 | 100 | 69,2 |
| 2/2013 Dermato pathology | 1 | 33,3 | 37,5 |
| | 2 | 66,7 | 47,9 |
| | 3 | 100 | 85,4 |
| | 4 | 100 | 75 |
| | 5 | 33,3 | 72,9 |
| | 6 | 33,3 | 60,4 |
| 1/2014 Routine Pathology | 1 | 100 | 98 |
| | 2 | 100 | 98 |
| | 3 | 66,7 | 40,8 |
| | 4 | 88,9 | 81,6 |
| | 5 | 100 | 95,9 |
| | 6 | 100 | 91,8 |
| | 7 | 100 | 92 |
| Mean | | 81,1 | 75,1 |

The performance of the Portuguese pathology laboratories was evaluated in the Histopathology schemes, in three of the four rounds available, with a total of 20 cases (routine and dermatopathology). On average, 81% of the Portuguese answers were in agreement with the reference diagnoses, ranging between 33,3% and 100%. The highest number of incorrect results was observed in the dermatopathology round.

Graph 1: Number of Pathology schemes ordered (column) and number of participating laboratories (line) between 2009 and 2015



In 2014 a significant increase in participation was observed, the schemes being Histopathology and Cytology with the highest number of participants (from 10 to 23 and from 8 to 17, respectively). This increase coincided with the beginning of the cooperation with Labquality, PNAEQ and the Portuguese Doctors Guild, that started in the end of 2013 (represented in the graph by the dotted box).

CONCLUSION

We would like to see all pathology laboratories participating in EQA schemes and we will involve Portuguese experts to evaluate the results of all the schemes available. We will continue to promote annual results discussion meetings to improve the performance of the laboratories.