

"Structure" indicators – workload	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
Total number of diagnostic points* performed in the laboratory / Total number of senior pathologists	Bibliography	Transversal	4	5
Total number of diagnostic points* performed in the laboratory / Total number of technicians	Bibliography	Transversal	4	5
Total number of paraffin blocks produced / Total number of specialized technicians assigned to histology	Bibliography	Transversal	3	5
Percentage of first cytological screening performed by cytotechnologist	Bibliography	Analytic	4	5
Percentage of grossing evaluation performed by technicians	Bibliography	Analytic	4	5
Total number of externalized diagnostic points* / Total number of received diagnostic points*	Bibliography	Transversal	4	4
Total number of cytologic exams / Total number of cytotechnologists	Expert	Transversal	4	5
Total number of complex specimen (cancerous specimen) / Total number of grossing specializes technician	Expert	Transversal	3	5

"Structure" indicators – laboratory information systems	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
The laboratory has electronic requisitions available	Bibliography	Transversal	1	5
The laboratory has digital pathology equipment	Bibliography	Transversal	4	3
Grossing room with sound acquisition system	Bibliography	Transversal	3	5
The laboratory has photographic equipment in grossing room	Bibliography	Transversal	3	5
The laboratory has a specialized informatics application	Bibliography	Transversal	1	5
The laboratory uses barcodes/QR codes to identify the samples at all stages of the process	Expert	Transversal	2	5
The laboratory information systems allow specimen's traceability at any stage of the anatomopathological routine	Expert	Transversal	2	5
Number of laboratory information system non-conformities	Expert	Transversal	2	5

"Structure" indicators – facilities	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
Total facilities' area / Total number of employees	Bibliography	Transversal	4	5
Laboratory noise level assessment	Bibliography	Transversal	2	5
Laboratory air conditioning assessment	Bibliography	Transversal	3	5
Ventilation conditions and chemical vapor extraction assessment	Bibliography	Transversal	2	5
Lighting conditions assessment	Expert	Transversal	3	5
Ergonomic conditions evaluation	Expert	Transversal	3	5
Professional's exposure time to chemical agents' evaluation	Expert	Transversal	3	5

"Structure" indicators - work accidents	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
Number of work accidents in need of medical assistance / Total number of laboratory accidents	Bibliography	Transversal	4	5
Number of work accidents without the need for medical assistance / Total number of laboratory accidents	Expert	Transversal	4	5
Work accidents' characterization (falls, spills, cuts, among others)	Expert	Transversal	4	5

"Structure" indicators - external quality assessment programs	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
Compare the participations and results in External Quality Assessment Programs	Bibliography	Transversal	4	5
Compare the deviation of each laboratory according to the mean (Within the same evaluation program and technique)	Expert	Transversal	4	5

"Structure" indicators – others	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
Number of stockouts (due to supplier failure vs laboratory responsibility)	Expert	Transversal	4	5

Percentage of equipment without preventive maintenance and/or annual internal verification	Expert	Transversal	4	5
Percentage of corrective vs preventive maintenance	Expert	Transversal	4	5

"Process" indicators	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
Non-conformities detected when receiving samples	Bibliography	Pré – Analytic	1	5
Misidentification of samples, containers, cassettes, paraffin blocks, or slides	Bibliography	Transversal	1	5
Repetition of immunocytochemistry slides	Bibliography	Analytic	4	5
Concordance between gynecological cytology and cervical biopsy diagnostics	Bibliography	Analytic	4	5
second gynecological cytology screening false negatives	Bibliography	Analytic	2	5
ASC/SIL ratio in cervicovaginal cytology	Bibliography	Analytic	4	5
Concordance between extemporaneous and definitive exam diagnosis	Bibliography	Analytic	2	5
Concordance between first pathological diagnosis and second opinion	Bibliography	Analytic	2	5
Retrospective review of closed cases	Bibliography	Analytic	4	5
Multidisciplinary therapeutic decision meetings pathologists' participation	Bibliography	Pós- Analítico	3	5
Multidisciplinary therapeutic decision meetings discussed cases	Bibliography	Post-analytic	3	5
Urgent biopsies turnaround times	Bibliography	Transversal	1	5
Pathologic reports timely issued	Bibliography	Post-analytic	2	5
Anatomopathological reports amendments after issued	Bibliography	Post-analytic	3	5
Appropriate pathologic coding	Bibliography	Post-analytic	4	5
Percentage of paraffin blocks with number of fragments different from that described in the macroscopy/record	Expert	Analytic	3	5
Percentage of new grossing harvests due to inadequate or insufficient sampling	Expert	Analytic	2	5
Repetition HE slides rate (new cut, re-embedding, etc.)	Expert	Analytic	3	5
Percentage of cases with good cut, color, and digital image (if available) quality	Expert	Analytic	4	5

Percentage of cases with digital imaging that required a glass slide for diagnostic confirmation	Expert	Analytic	4	5
Percentage of corrective actions considered effective	Expert	Transversal	3	5
Quality assessment of histochemical techniques (evaluation of staining quality on each slide)	Expert	Analytic	3	5
Quality assessment of the immunocytochemical technique (assessment of the quality of the technique on each slide)	Expert	Analytic	3	5
Comparison of "Her2/neu" protein evaluation ratios in breast tumors	Expert	Analytic	3	5
Percentage of inconclusive diagnoses and/or insufficient material in FNA performed by senior pathologists	Expert	Analytic	3	5
Cyto-histological correlation of cytology and histology specimen (when available)	Expert	Analytic	3	5
Percentage of disagreement between cytotechnician and senior pathologists	Expert	Analytic	3	5
Evaluation of average turnaround times for different samples	Expert	Transversal	4	5
Percentage of laboratory errors with impact on the patient (such as increased turnaround time)	Expert	Transversal	3	5
Adequacy of billing coding in accordance with current regulations	Expert	Post-analytic	3	5

"Result" indicators	QPI origin	Total test cycle phase	Consensus round	Final classification ("1 – not relevant" to "5 - totally relevant")
Customer Satisfaction	Bibliography	Transversal	2	5
Employee satisfaction	Expert	Transversal	3	5
N. of complaints received	Expert	Transversal	2	5

Final validated QPI panel

*diagnostic points is a system that evaluates the pathologist's workload according to complexity and typology; it recommends a maximum workload per hour