



Harmonization of CBC reference ranges (acceptable limits) for European EQAS



Purpose

- ▶ **To provide appropriate criteria to evaluate the performance of medical laboratories in the field of haematology (cells counting, white cells differentiation).**



Conclusions of the Working Group (2011)

- ▶ To provide acceptable limits only for cells counting (*white cells differentiation was postpone*)
- ▶ To provide acceptable limits for improvement analytical used (*not for licensing purpose*)
- ▶ Same acceptable limits for cells counting on equipment and on microscope
- ▶ First step : collecting data in 2012 from EQA organizers (*what is currently done : which analyte, which nature of sample, which AL, licensing purpose or not*)

Decisions in Herlev (2012)

Exploitation of the investigation

12 organisations

same AL on fresh and stabilized blood, higher AL in case of licensing purpose

AL can be according programs: percentage, 3 SD, 1.64xCV, deviation index values.



To carry out a statistical study

Scope of the statistical study



From the data obtained by each EQAP :

- Determine the coefficient of variation obtained by the 50% of most efficient laboratories
- Calculate the percentage of unsatisfactory results obtained in each scheme with different predetermined AL



Scope of the statistical study



- ▶ relevant parameters : WBC, TBC, RBC, Hb, HCT, MCV and Reticulocytes
- ▶ analytical studies on 3 levels : low, normal and high
- ▶ analytical studies on lyophilized and fresh blood
- ▶ to consider pear groups.

Data collection 2013

lab	parameter	sample identification	sample type	equipment: manufacturer	equipment: type	result	units	evaluation1	evaluation2
11.RBC		H/10211---Sample 2010/1 (1)	fresh blood	ABBOTT	Cell-Dyn Sapphire	5,05	10e12/L	0	0
22.WBC		H/10211---Sample 2010/1 (1)	fresh blood	SIEMENS (BAYER)	ADVIA 2120	1,12	10e9/L	0	0
33.HB		H/10211---Sample 2010/1 (1)	fresh blood	SYSMEX	XT2000i	155	g/L	1	2
33.HB		H/10212---Sample 2010/1 (2)	fresh blood	SYSMEX	XT2000i	147	g/L	1	4
41.RBC		H/10832---Sample 2010/3 (2)	stabilized blood	SYSMEX	XE5000	4,27	10e12/L	1	3
57.RETICULOCYTES		H/11542---Sample 2011/3 (1)	stabilized blood	SYSMEX	XE-alpha	1	%	1	3
67.RETICULOCYTES		H/12081---Sample 2012/3 (2)	stabilized blood	BECKMAN (COULTER)	Unicel DxH 800	1,19	%	1	3
32.WBC		H/12242---Sample 2013/1 (2)	stabilized blood	SYSMEX	XN2000	5,44	10e9/L	0	0

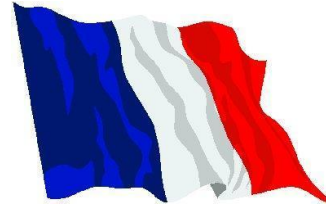
Data collection 2013



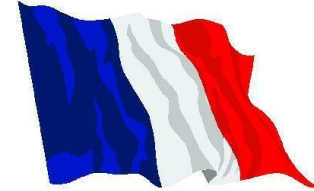
ISP



DEKS



ANSM



CTCB



PNAEQ



Hopital Clinic



CSCQ



UK NEQAS



more than lines 422,000 have been filled

Data Processing



Team of statisticians from the ISP (Belgium) volunteered for the data processing. Mohamed Rida Soumali will therefore now present the first results...still alive despite the workload !

