HPN AFC / PNH

Working group of the Association Française de Cytométrie sur l'Hémoglobinurie Paroxystique Nocturne (French Cytometry Association on Paroxysmal Nocturnal Haemoglobinuria)

DETECTION OF PNH CLONES BY FLOW CYTOMETRY

STANDARDISED CONCLUSIONS

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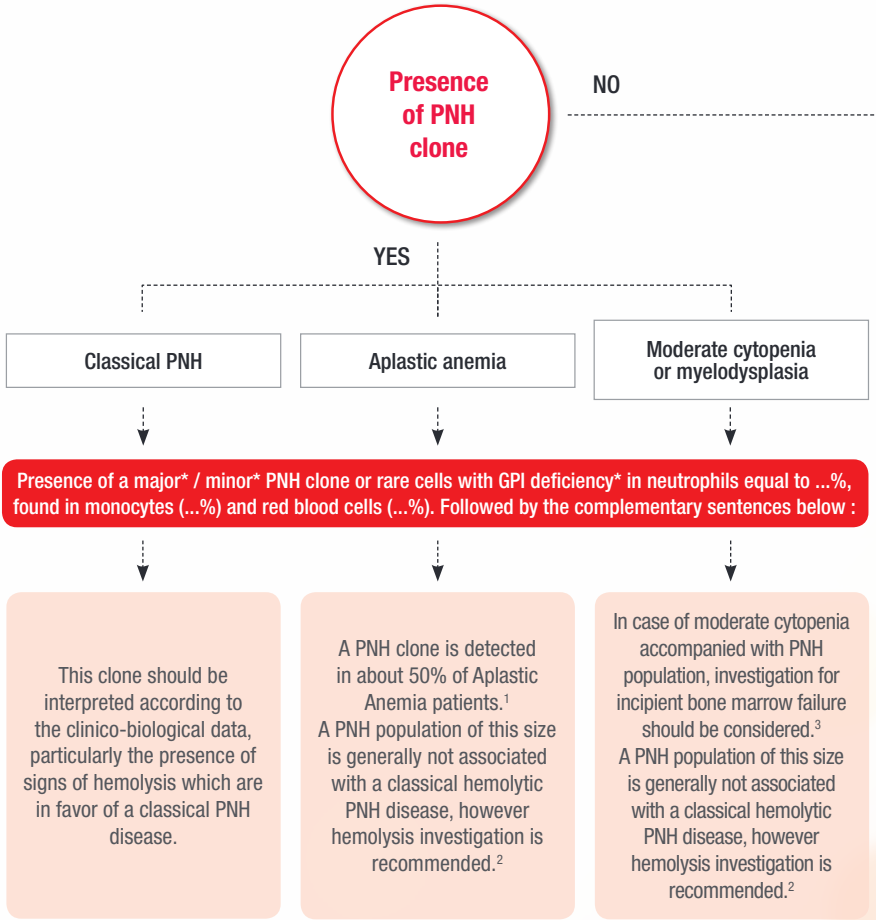
ALEXION

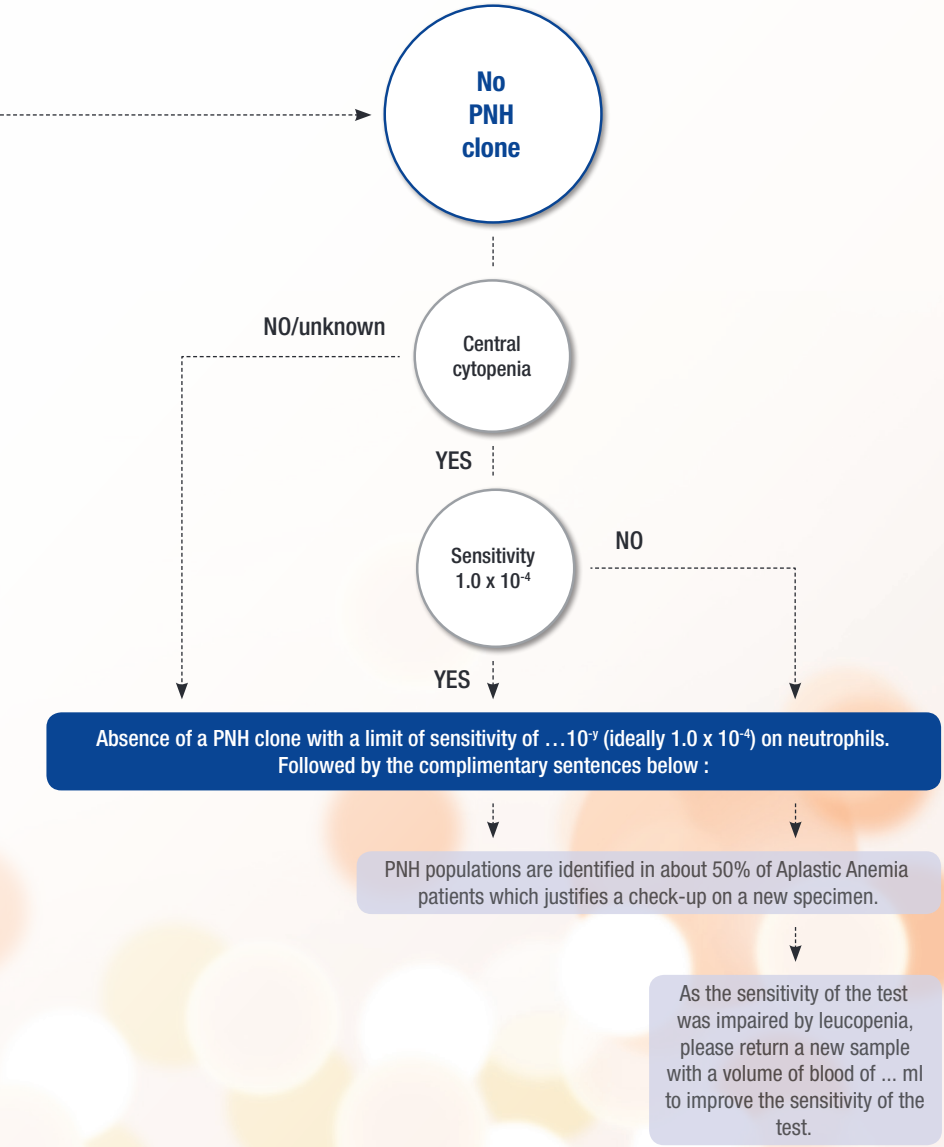
DIAGNOSIS



A follow-up must be requested according to the most recent recommendations: in classical PNH disease, at least once a year or upon any clinical or biological evolution; in AA, every three to six months at the beginning, and then reducing the frequency if the clone remains stable over the first two-year period; and in MDS, if evidence of Direct Antiglobulin Tests-negative hemolysis is present

GPI : Glycosylphosphatidylinositol PNH : Paroxysmal Nocturnal Hemoglobinuria AA : Aplastic Anemia MDS : Myelodisplasic Syndrome.

*The qualification of the PNH clone is dependent on its percentage: ≥ 50% = major PNH clone; <50->1% = PNH clone; 1%-0,1% = minor PNH clone; <0,1% = rare cells with GPI deficiency


No PNH clone
NO/unknown
Central cytopenia
YES
Sensitivity 1.0 x 10-4
NO
YES
Absence of a PNH clone with a limit of sensitivity of …10-y (ideally 1.0 x 10-4) on neutrophils. Followed by the complimentary sentences below :
PNH populations are identified in about 50% of Aplastic Anemia patients which justifies a check-up on a new specimen.
As the sensitivity of the test was impaired by leucopenia, please return a new sample with a volume of blood of ... ml to improve the sensitivity of the test.

FOLLOW-UP

Follow-up in previously diagnosed PNH cases

Increase or persistence of the clone

Clone decrease

Persistence of a major* / minor* PNH clone or rare cells with GPI deficiency* in neutrophils equal to ...%, found in monocytes (...%) and red blood cells (...%). Followed by the complementary sentences below :

- The clone remains stable in comparison with the previous analysis (date).

or

- The increase of the clone in comparison with the previous analysis (date) should be an indication to explore biological signs of hemolysis.

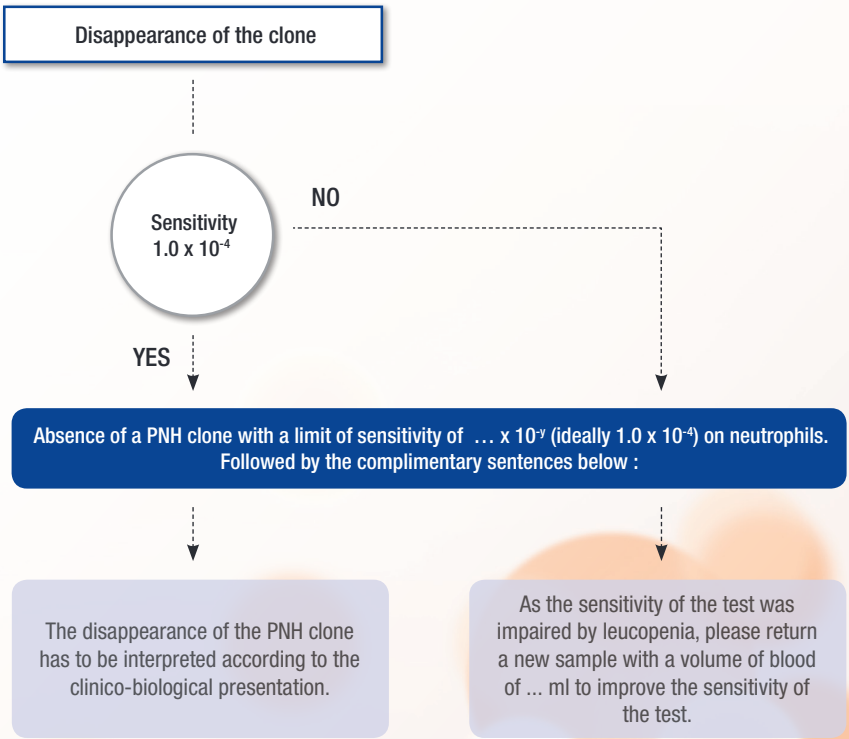
- The clone decreases in comparison with the previous analysis (date).

or

- The decrease of the clone in comparison with the previous analysis (date), associated with the appearance of cytopenia, need to investigate for incipient bone marrow failure.

A follow-up must be requested according to the most recent recommendations: in cla
AA, every three to six months at the beginning, and then reducing the frequency if the
Antiglobulin Tests-negat

* PNH clone qualification depends on its size: ≥50% = major PNH clone; <50->1% = PNH clone; 1-0.1% = minor PNH clone; < 0.1% = rare cells presenting a deficiency in GPI-related proteins



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ive hemolysis is present

WORK BASED ON INTERLABORATORY COMPARISONS [5] OF THE HPN[AFC]/PNH GROUP

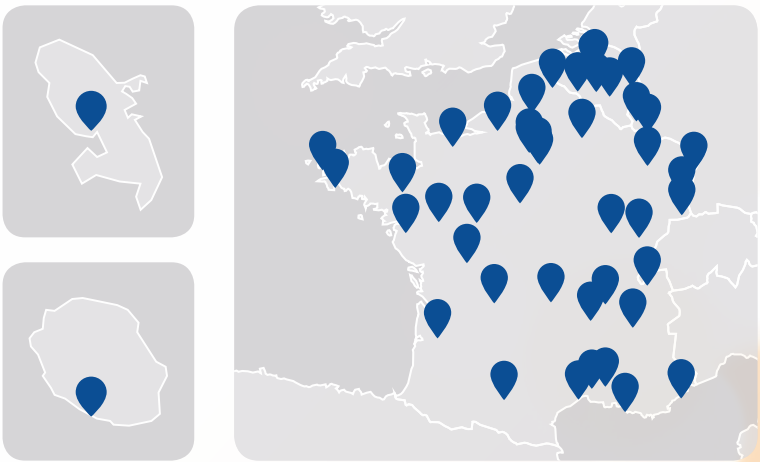
1 CD:
CV1-2013
CV2-2013
CV3-2013

Fresh case:
CF1-2014
CF2-2014

2 CDs:
CV1-2014
CV2-2014
CV3-2014
CV4-2014

2013 **2014**

The HPN[AFC]/PNH group wishes to thank all of the participating sites



1 CD:
CV1-2015
CV2-2015

Fresh case:
CF1-2016
CF2-2016

1 CD:
CV1-2016
CV2-2016

Fresh case:
CF1-2017
CF2-2017

1 CD:
CV1-2017
CV2-2017

19 interactions in 5 years

References:

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4. Illingworth A, Marinov I, Sutherland DR, Wagner-Ballon O, DelVecchio L. ICCS/ESCCA consensus guidelines to detect GPI-deficient cells in paroxysmal nocturnal hemoglobinuria (PNH) and related disorders part 3 - data analysis, reporting and case studies. *Cytometry B Clin. Cytom.* 2018;94:49–66.
5. Debliquis A, Wagner-Ballon O, Le Garff-Tavernier M, Fossat C, Chatelain B, Letestu R, Drénou B, HPN-AFC Group. Evaluation of paroxysmal nocturnal hemoglobinuria screening by flow cytometry through multicentric interlaboratory comparison in four countries. *Am. J. Clin. Pathol.* 2015;144:858–868

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