

< Sélectionner une autre question



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
Entrez le code d'événement dans le bandeau supérieur

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Cliquez sur l'écran projeté pour lancer la question

En attente de participants...

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Workshop

Clonal hematopoiesis

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18/04/2026

Which of the following best defines CHIP?

① Somatic mutation with cytopenia 0% 0

② Somatic mutation without cytopenia 0% 0

③ Cytopenia without mutation 0% 0

④ Dysplasia with mutation 0% 0



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What is the most appropriate diagnosis? 75-year-old patient Hb 10.8 g/dL MCV 101 fL Platelets normal TET2 mutation (VAF 12%) Bone marrow: no dysplasia

① CHIP 0% 0 👤

② ARCH 0% 0 👤

③ CCUS 0% 0 👤

④ ICUS 0% 0 👤



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In a patient with CHIP, what is the most appropriate management?

1 Immediate bone marrow biopsy 0% 0

2 MDS-like treatment 0% 0

3 No follow-up needed 0% 0

4 Cardiovascular risk management 0% 0



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72-year-old patient — incidental finding

- Hb 13.2 g/dL
- WBC 7.5
- Platelets 230
- MCV 96
- TET2 mutation
- (VAF 9%)

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Modifier la question

What is this?

1 CHIP 0% 0

2 ARCH 0% 0

3 CCUS Cliquez sur l'écran projeté pour lancer la question 0% 0

4 ICUS 0% 0

5 MDS 0% 0

wooclap

100%

What does it mean?

Term	Definition	Key Features
Clonal Hematopoiesis (CH)	Clonal expansion of HSCs with somatic mutations	Includes all subtypes below
CHIP (CH of Indeterminate Potential)	Pathogenic oncogenic driver genes + VAF $\geq 2\%$ + No cytopenia, no hematologic malignancy	Normal CBC; clonality ; no dysplasia
ARCH (Age-Related CH)	= CHIP , strong link to aging	= CHIP; highlight aging process
CCUS (Clonal Cytopenia of US)	CHIP + persistent unexplained cytopenia + no criteria for MN	Higher risk of transformation
ICUS (Idiopathic Cytopenia of US)	Unexplained cytopenia + No detectable clonal markers	No clonality ; diagnosis of exclusion

72-year-old patient — incidental finding

- Hb 13.2 g/dL
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What is this?

- A. CHIP
- B. ARCH
- C. CCUS
- D. ICUS
- E. MDS



What would you do next?



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What would you do next?

- A. Nothing
- B. Bone marrow
- C. Cardiovascular assessment
- D. NGS 1x/y
- E. CBC 1x/y

What do we do in practice?

72-year-old man

- Hb 13.2 g/dL
- WBC 7.5
- Platelets 230
- MCV 96
- TET2 mutation (VAF 9%)

What is this?

- A. CHIP
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Bone marrow biopsy?

- A. Yes
- B. No

What would you do next?

- A. Nothing
- B. Bone marrow
- C. Cardiovascular assessment
- D. NGS 1x/y
- E. CBC 1x/y

- Cardiovascular risk factor:
 - x1,5 – 2
 - CHIP → Inflammation → Atherosclerosis
- Aggressive CVRF modification
 - HTA, LDL-Chol, DB, obesity, tobacco cessation
- CHIP = "risk-enhancing factor"
 - → Statin (similar to elevated Lp(a))
- GLP-1 agonists or SGLT2 inhibitors for DB
- NO Aspirin for primary prevention

What would you do next?

- A. Nothing
- B. Bone Marrow
- C. Cardiovascular assessment
- D. NGS 1x/y
- **E. CBC 1x/y**

- Hematologic progression: LOW (~1%/an)
- Clonal Hematopoiesis Risk Score (CHRS)

Calculator: www.chrsapp.com

Entity	Monitoring Frequency	Key Actions
CHIP	Monitor based on clinical change	Observation; CV risk optimization
ICUS	Monitor yearly	Observation
Lower-risk CCUS	Monitor yearly	Observation
High-risk CCUS	Monitor 2–4x/year CBC	Consider clinical trial

How would you treat this patient?



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Would you treat this patient?

- A. No
- B. Statin
- C. Aspirin
- D. Chemotherapy

Would you treat this patient?

- A. No
- B. Statin according to PREVENT/ASCVD risk
- C. Aspirin
- D. Chemotherapy

One year later... 73 yo

- Hb 10.8
- MCV 102
- WBC 6.5
- Platelets 150
- TET2 mutation
- (VAF 9%)

The screenshot shows a presentation slide on a mobile device. At the top, there is a dark blue header with a back arrow and the text "Sélectionner une autre question" on the left, and a white button with a pencil icon and the text "Modifier la question" on the right. The main content area has a dark grey background with the text "One year later, what is this?" centered. Below the text is an illustration of a laptop and a tablet. The tablet screen shows a play button icon, and a white mouse cursor is pointing at it. Below the illustration, the text "Cliquez sur l'écran projeté pour lancer la question" is displayed. On the left side of the slide, there are three circular icons: a blue one with a grid, a grey one with three horizontal lines, and a grey one with a cloud. At the bottom of the slide, there is a dark blue footer with the "wooclap" logo on the left and a navigation bar on the right containing a lock icon, a magnifying glass icon, "100%", and another magnifying glass icon. A small envelope icon is also visible in the bottom right corner of the slide area.

One year later... 73 yo

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What is this?

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One year later, what would you do next?



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One year later... 73 yo

- Hb 10.8
- MCV 102
- WBC 6.5
- Platelets 150
- TET2 mutation (VAF 9%)

What is this?

- A. CHIP
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Bone marrow biopsy? → No dysplasia

- A. Yes
- B. No

How would you follow this patient?



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One year later... 73 yo

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Bone marrow biopsy? → No dysplasia

- A. Yes
- B. No

What to do?

- Higher progression risk
- CBC /3-6mo

Two years later... 74 yo

- Hb 9.4
- MCV 104
- ANC 0,9
- Platelets 110

What is this?

- A. CHIP
- B. ARCH
- C. CCUS
- D. ICUS
- E. MDS

Bone marrow biopsy?

- A. Yes
- B. No

Two years later... 74 yo

- Hb 9.4
- MCV 104
- ANC 0,9
- Platelets 110

What is this?

- A. CHIP
- B. ARCH
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Bone marrow biopsy? → Dysplasia > 10%

A. Yes

B. No

→ Blasts 4%

→ Normal KT

→ TET2 + ASXL1

STRATIFICATION RESULTS

IPSS-M Score:

-0.39 MODERATE LOW

IPSS-R Score:

3.00 LOW

IPSS-R Score (Age-adjusted):

3.14 INT

<https://mds-risk-model.com/>

ENDPOINTS

Leukemia-Free Survival (IPSS-M):

4.5 years median

1.6-6.9 years, 25%-75% range

Overall Survival (IPSS-M):

4.6 years median

2-7.4 years, 25%-75% range

AML Transformation (IPSS-M):

4.9% by 1 year

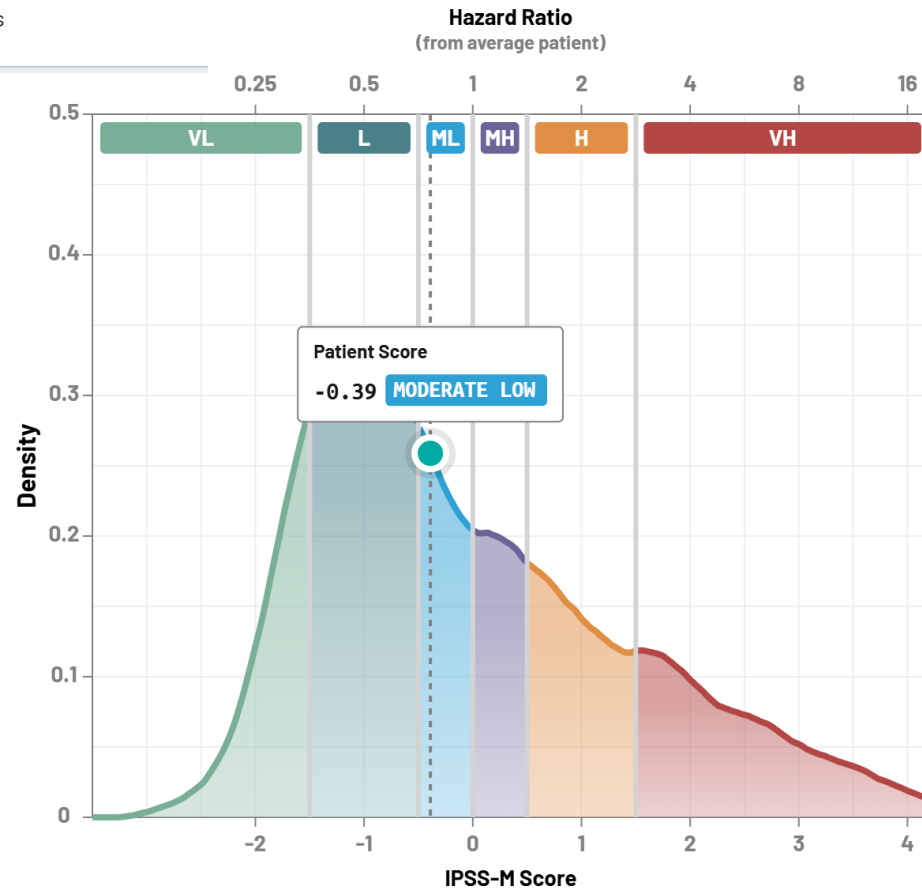
11.4% by 4 years

Risk Stratification

Clinical Outcomes

Graph

Table



- Very Low | 14%
- Low | 33%
- Moderate Low | 11%
- Moderate High | 11%
- High | 14%
- Very High | 17%

*Hazard ratio for risk of AML-t or death from the average patient.

Bernard E, Tuechler H, Greenberg PL, et al, The Molecular International Prognosis Scoring System (IPSS-M) for risk stratification in myelodysplastic syndromes. *New Eng J Med Evidence*, 1(7). [doi:10.1056/evidoa2200008](https://doi.org/10.1056/evidoa2200008). Study supported by the MDS Foundation.

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