Sulayman 4 ans

- Pas ANTCDS
- J0: température-IVRS-amoxy
- J3: se présente urgences pour persistance température rhinite- excellent EG- examen clinique nl-
  SUCU: acétone ++-
- J+10: antibio stoppé-plus de température- douleur abdominale –pleurs- nausées – pas de vomissements-consulte aux urgences- doute hypoventilation base gauche

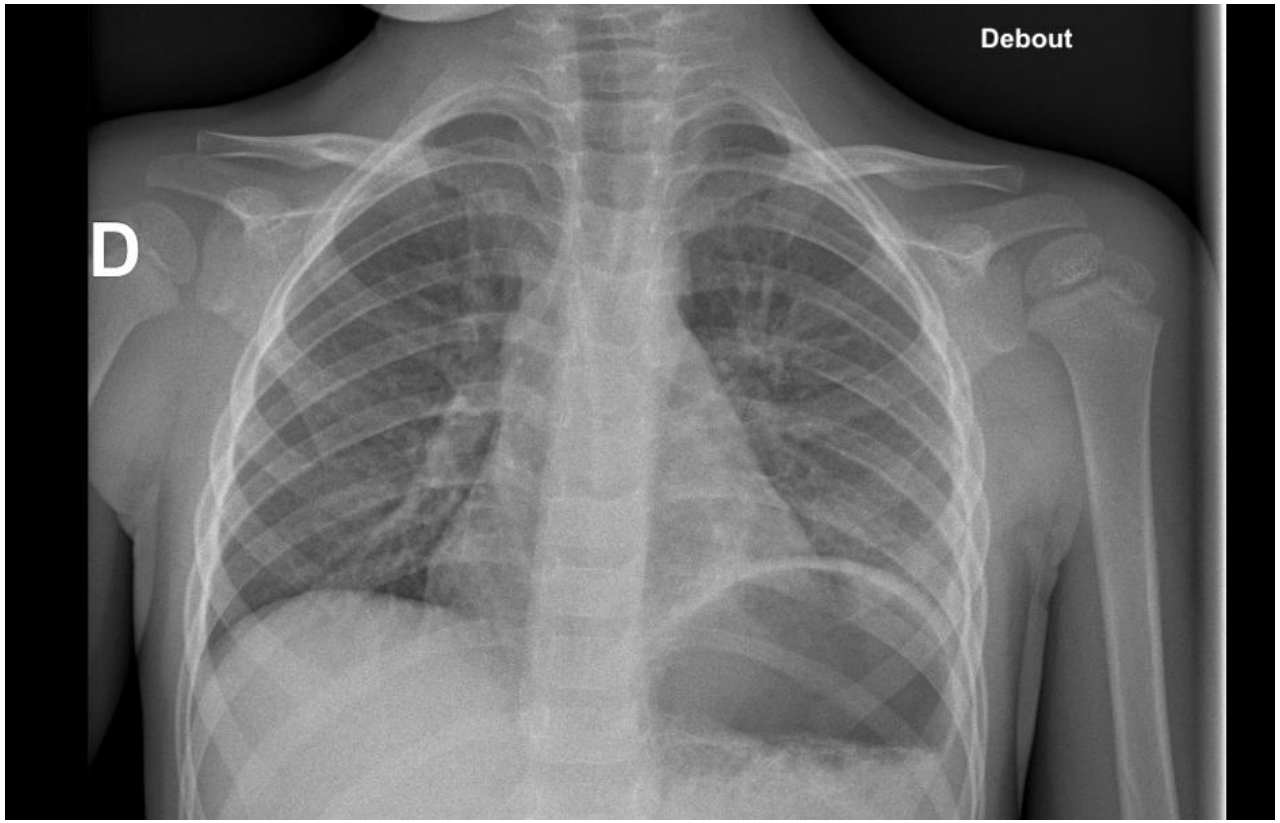
Sulayman 4 ans

- Biologie

MARQUEURS INFLAMMATOIRES						
CRP		5.94	mg/L	< 8.00	✔	11/10/2025 23:26 (V)
CYTOLOGIE HEMATOLOGIQUE						
HEMOGRAMME						
Hémoglobine		11.7	g/dL	11.5 - 14.5	✔	11/10/2025 23:01 (V)
Erythrocytes x 10^6		4.880	/µL	4.000 - 5.300	✔	11/10/2025 23:01 (V)
Hématocrite		36.0	%	33.0 - 43.0	✔	11/10/2025 23:01 (V)
M.C.V. (Volume globulaire moyen)	-	**73.8**	µm³	76.0 - 90.0	✔	11/10/2025 23:01 (V)
M.C.H. (Poids Hgb/GR)	-	**24.0**	pg	27.5 - 34.0	✔	11/10/2025 23:01 (V)
M.C.H.C. (Conc Hgb/GR)		32.5	g/dL	32.0 - 36.5	✔	11/10/2025 23:01 (V)
R.D.W.(Index d'anisocytose)		14.5	%	11.5 - 14.5	✔	11/10/2025 22:59 (V)
Leucocytes x 10³	+	**17.60**	/µL	4.00 - 12.00	✔	11/10/2025 23:01 (V)
Formule absolue						
Neutrophilie abs. x 10³	+	**12.267**	/µL	1.500 - 8.500	✔	11/10/2025 23:01 (V)
Lymphocytose abs. x 10³		3.749	/µL	1.500 - 6.500	✔	11/10/2025 23:01 (V)
Monocytose abs. x 10³	+	**1.130**	/µL	0.200 - 1.000	✔	11/10/2025 23:01 (V)
Eosinophilie abs. x 10³		0.420	/µL	0.000 - 0.700	✔	11/10/2025 23:01 (V)
Basophilie abs x 10³		0.04	/µL	0 - 0.2	✔	11/10/2025 23:01 (V)
Formule relative						
Neutrophiles		69.7	%	38.0 - 71.0	✔	11/10/2025 23:01 (V)
Lymphocytes	-	**21.3**	%	28.0 - 54.0	✔	11/10/2025 23:01 (V)
Monocytes		6.4	%	2.0 - 12.0	✔	11/10/2025 23:01 (V)
Eosinophiles		2.4	%	1.0 - 6.0	✔	11/10/2025 23:01 (V)
Basophiles		0.2	%	0.0 - 2.0	✔	11/10/2025 23:01 (V)
Type de formule leucocytaire		Formule réalisée par l'analyseur			✔	11/10/2025 22:59 (V)
Plaquettes x 10³	+	**511**	/µL	150 - 450	✔	11/10/2025 23:01 (V)
M.P.V. (Volume plaquettaire moyen)	-	**8.9**	µm³	9.4 - 12.4	✔	11/10/2025 22:59 (V)

Sulayman 4 ans

- Rx thorax



Sulayman 4 ans

- J+11:revient car un pic temp 38,5-prostré- baisse hydratation- toux sèche –douleur abdominale

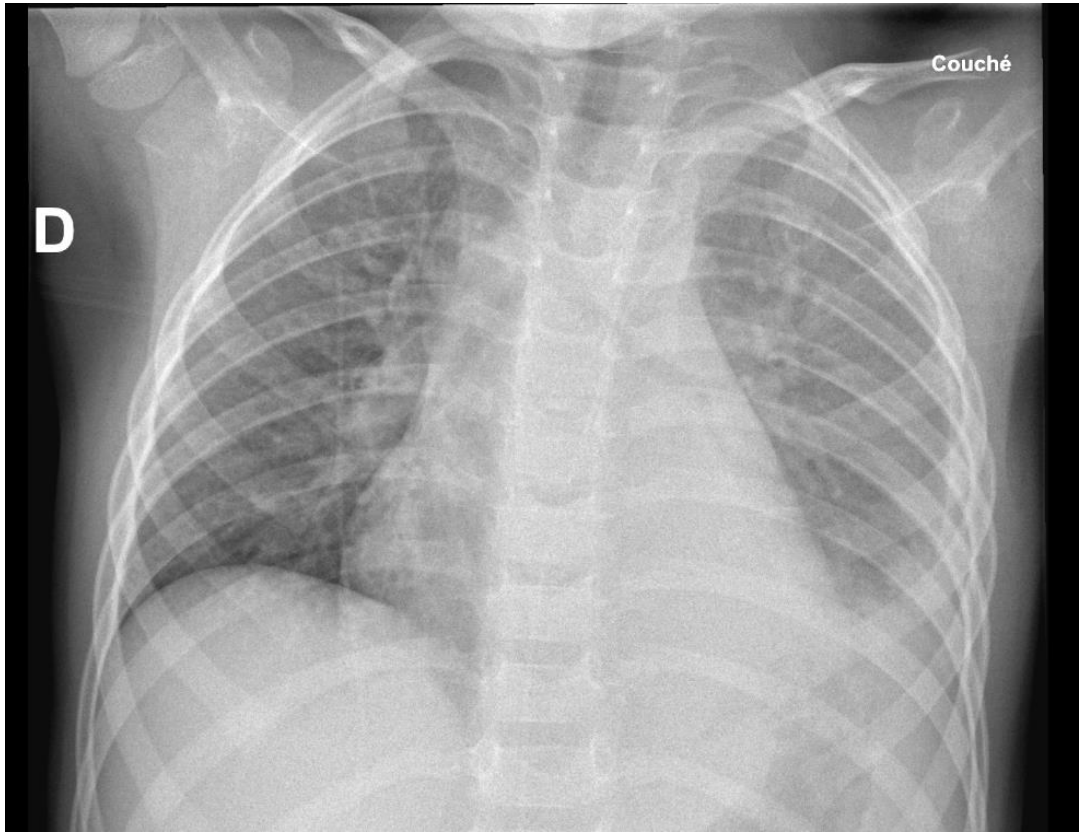
➢Biologie

MARQUEURS INFLAMMATOIRES						
CRP	+	108.85	mg/L	< 8.00	✔	12/10/2025 20:26 (V)
CYTOLOGIE HEMATOLOGIQUE						
HEMOGRAMME						
Hémoglobine	-	11.1	g/dL	11.5 - 14.5	✔	12/10/2025 22:36 (V)
Erythrocytes x 10^6		4.610	/µL	4.000 - 5.300	✔	12/10/2025 22:36 (V)
Hématocrite		33.9	%	33.0 - 43.0	✔	12/10/2025 22:36 (V)
M.C.V. (Volume globulaire moyen)	-	73.5	µm³	76.0 - 90.0	✔	12/10/2025 22:36 (V)
M.C.H. (Poids Hgb/GR)	-	24.1	pg	27.5 - 34.0	✔	12/10/2025 22:36 (V)
M.C.H.C. (Conc Hgb/GR)		32.7	g/dL	32.0 - 36.5	✔	12/10/2025 22:36 (V)
R.D.W.(Index d'anisocytose)	+	15.0	%	11.5 - 14.5	✔	12/10/2025 22:33 (V)
Leucocytes x 10³	+	15.79	/µL	4.00 - 12.00	✔	12/10/2025 22:36 (V)
Formule absolue						
Neutrophilie abs. x 10³	+	10.816	/µL	1.500 - 8.500	✔	12/10/2025 22:36 (V)
Lymphocytose abs. x 10³		3.695	/µL	1.500 - 6.500	✔	12/10/2025 22:36 (V)
Monocytose abs. x 10³	+	1.140	/µL	0.200 - 1.000	✔	12/10/2025 22:36 (V)
Eosinophilie abs. x 10³		0.090	/µL	0.000 - 0.700	✔	13/10/2025 10:02 (V)
Basophilie abs x 10³		0.05	/µL	0 - 0.2	✔	12/10/2025 22:36 (V)
Formule relative						
Neutrophiles		68.5	%	38.0 - 71.0	✔	12/10/2025 22:36 (V)
Lymphocytes	-	23.4	%	28.0 - 54.0	✔	12/10/2025 22:36 (V)
Monocytes		7.2	%	2.0 - 12.0	✔	12/10/2025 22:36 (V)
Eosinophiles	-	0.6	%	1.0 - 6.0	✔	13/10/2025 10:02 (V)
Basophiles		0.3	%	0.0 - 2.0	✔	12/10/2025 22:36 (V)
Type de formule leucocytaire		Formule réalisée par l'analyseur			✔	12/10/2025 22:33 (V)

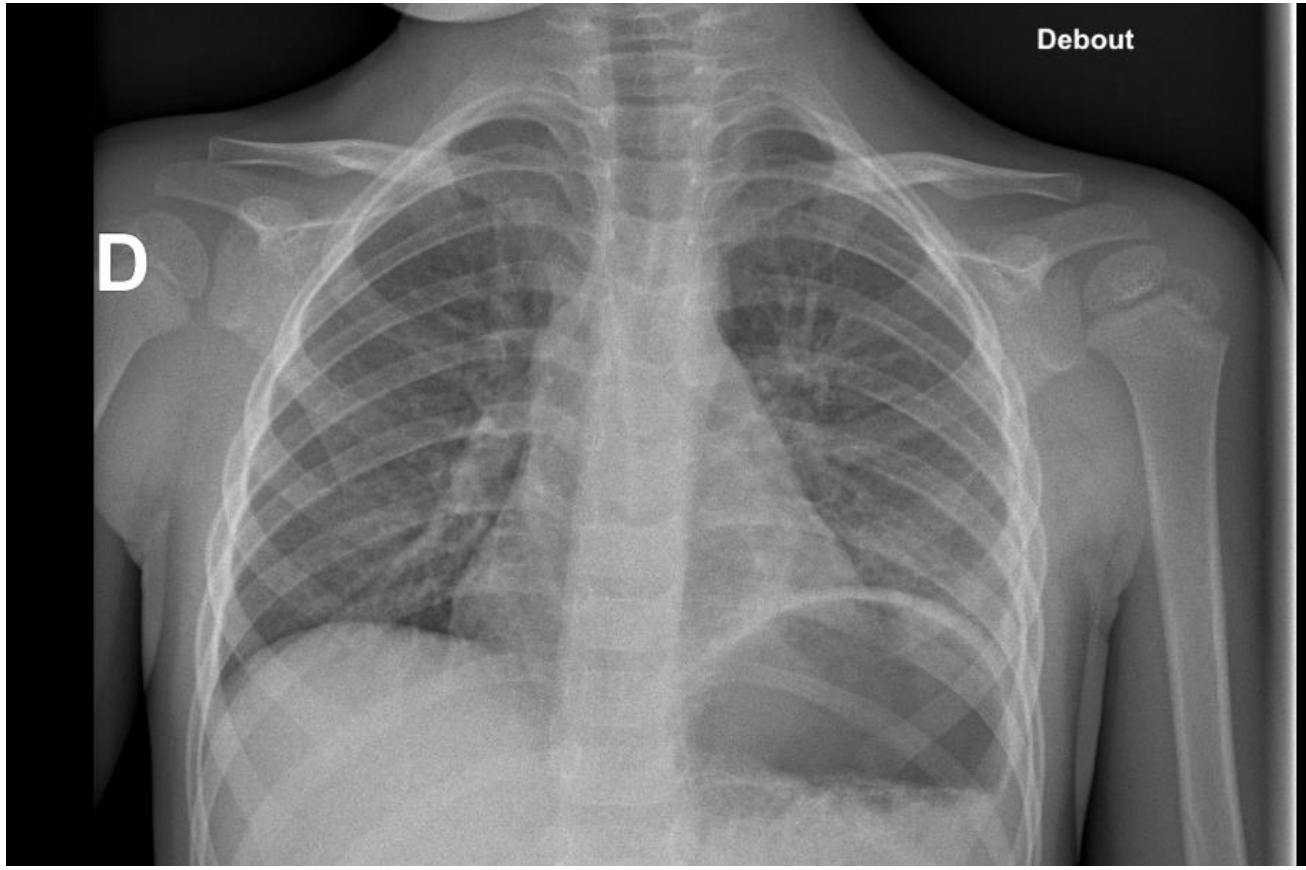
Sulayman 4 ans

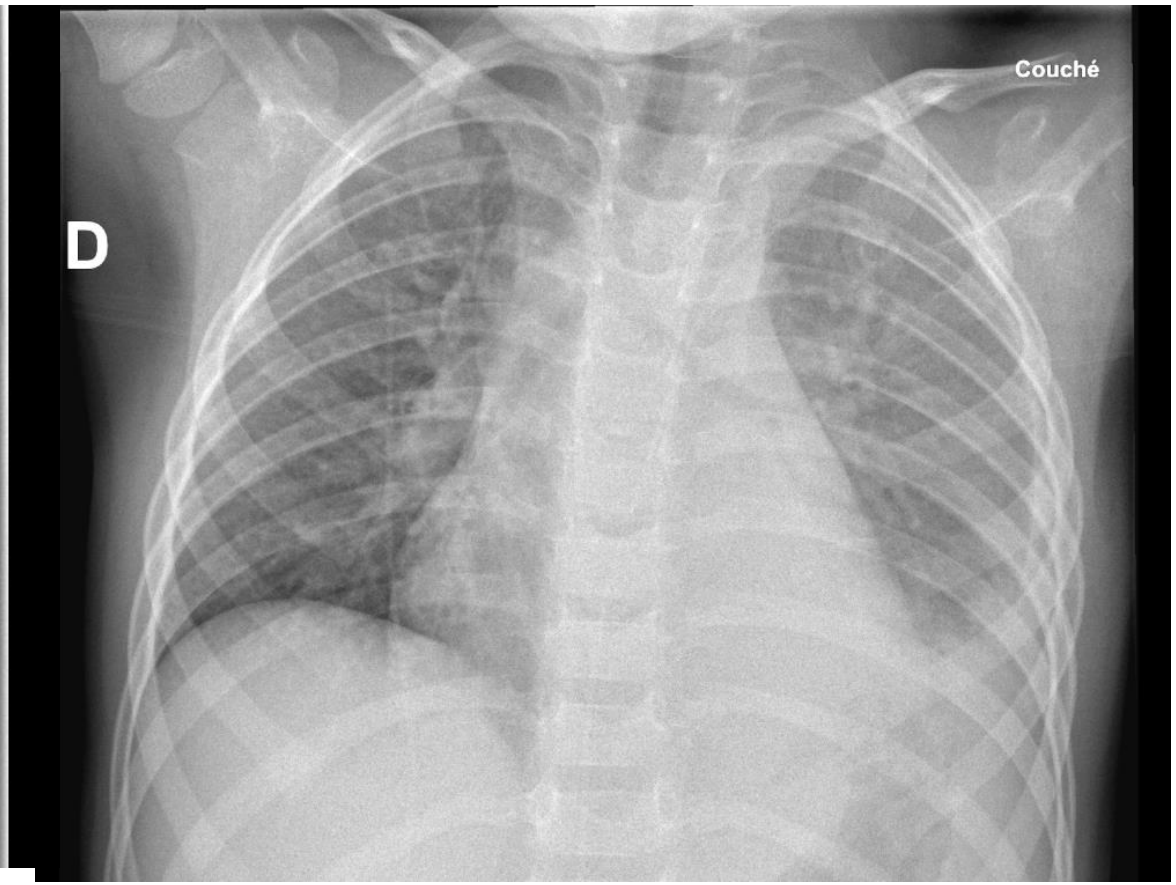
- J+8:revient car un pic temp 38,5-prostré- baisse hydratation- toux sèche –douleur abdominale-grunting) respiration superficielle

➢ Rx thorax



Sulayman 4 ans





Paul 08 04 2022- H 11 12 2025

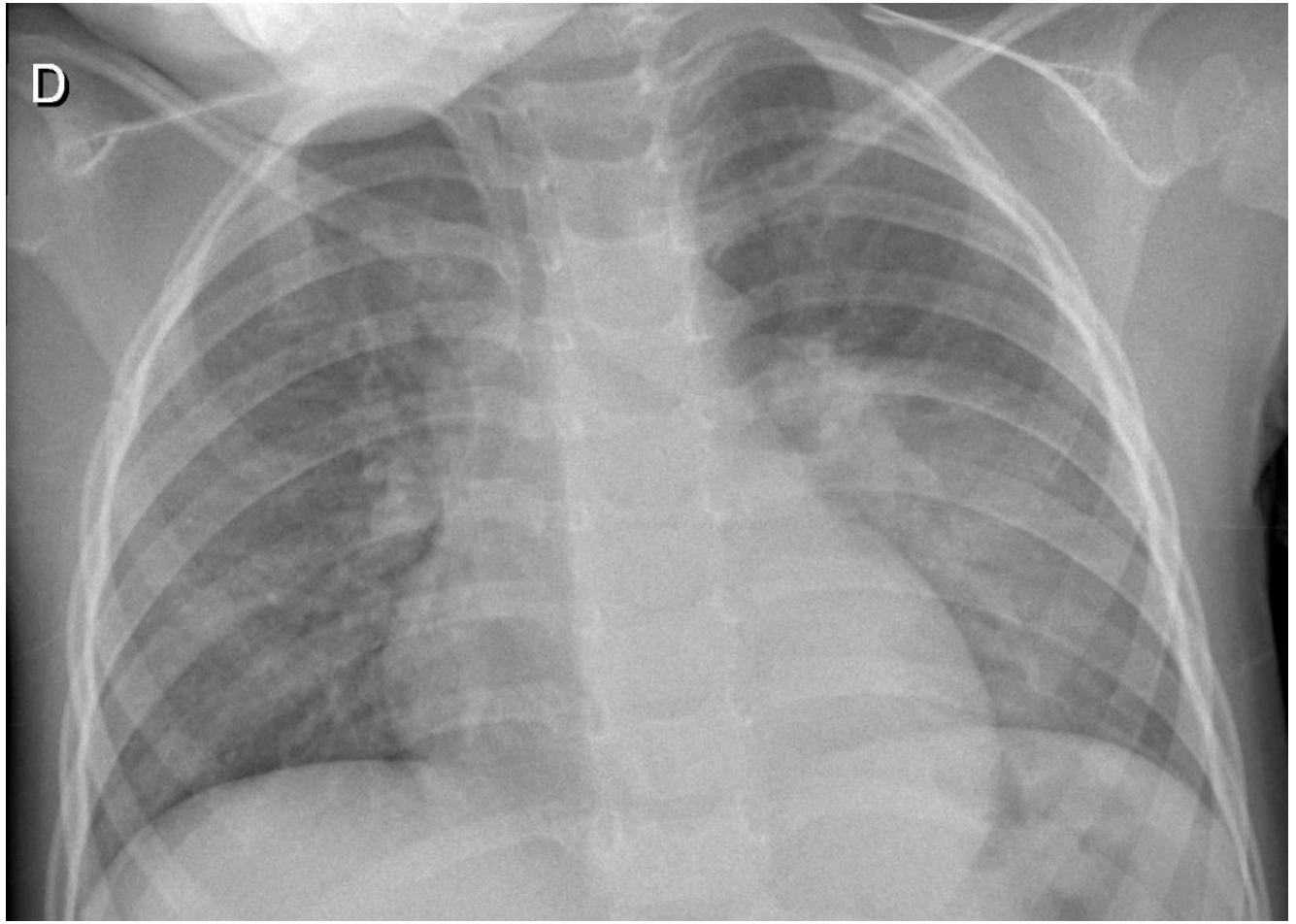
- 10 12 2025: aux urgences pour fièvre et vomissement. Diagnostic retenu de rhinopharyngite, ainsi que vomissement incoercible + crise de cétonurie. Résolution des vomissements sous lytican.
- Pas de vomissement depuis.
- Fièvre depuis 48h. Ce matin, 39°C de fièvre en intra-rectal. Traitement de la fièvre par perdolan + neurofen. Dernière prise de perdolan à 10h et de nurofen à 14h.
- Toux sèche avec accès le réveillant la nuit depuis 3 jours.
- Douleurs abdominales hier, pas de douleur aujourd'hui.

- 11 12 A vu son MT ce matin car altération de l'état général importante : suspicion de mycoplasme ou de foyer de pneumonie.
- MT l'a adressé aux urgences: diminution entrée air gauche.

Paul 08 04 2022- H 11 12 2025

MARQUEURS INFLAMMATOIRES						
CRP	+	**240.44**	mg/L	< 8.00	✔	11/12/2025 17:16 (V)
CYTOLOGIE HEMATOLOGIQUE						
HEMOGRAMME						
Hémoglobine	-	**11.0**	g/dL	11.5 - 14.5	✔	11/12/2025 16:36 (V)
Erythrocytes x 10^6	-	**3.730**	/µL	4.000 - 5.300	✔	11/12/2025 16:36 (V)
Hématocrite	-	**31.5**	%	33.0 - 43.0	✔	11/12/2025 16:36 (V)
M.C.V. (Volume globulaire moyen)		84.5	µm³	76.0 - 90.0	✔	11/12/2025 16:36 (V)
M.C.H. (Poids Hgb/GR)		29.5	pg	27.5 - 34.0	✔	11/12/2025 16:36 (V)
M.C.H.C. (Conc Hgb/GR)		34.9	g/dL	32.0 - 36.5	✔	11/12/2025 16:36 (V)
R.D.W.(Index d'anisocytose)		12.6	%	11.5 - 14.5	✔	11/12/2025 16:34 (V)
Leucocytes x 10³	+	**26.89**	/µL	4.00 - 12.00	✔	11/12/2025 17:16 (V)
Formule absolue						
Neutrophilie abs. x 10³	+	**23.771**	/µL	1.500 - 8.500	✔	11/12/2025 17:16 (V)
Lymphocytose abs. x 10³		1.694	/µL	1.500 - 6.500	✔	11/12/2025 16:36 (V)
Monocytose abs. x 10³	+	**1.400**	/µL	0.200 - 1.000	✔	11/12/2025 16:36 (V)
Eosinophilie abs. x 10³		0.000	/µL	0.000 - 0.700	✔	11/12/2025 16:36 (V)
Basophilie abs x 10³		0.03	/µL	0 - 0.2	✔	11/12/2025 16:36 (V)
Formule relative						
Neutrophiles	+	**88.4**	%	38.0 - 71.0	✔	11/12/2025 17:16 (V)
Lymphocytes	-	**6.3**	%	28.0 - 54.0	✔	11/12/2025 16:36 (V)
Monocytes		5.2	%	2.0 - 12.0	✔	11/12/2025 16:36 (V)
Eosinophiles	-	**0.0**	%	1.0 - 6.0	✔	11/12/2025 16:36 (V)
Basophiles		0.1	%	0.0 - 2.0	✔	11/12/2025 16:36 (V)
Plaquettes x 10³	+	**493**	/µL	150 - 450	✔	11/12/2025 16:36 (V)
M.P.V. (Volume plaquettaire moyen)	-	**8.6**	µm³	9.4 - 12.4	✔	11/12/2025 16:34 (V)
BIOCHIMIE DU SANG						
Ionogramme						
Sodium	-	**131**	mmol/L	137 - 145	✔	11/12/2025 17:16 (V)

Paul 08 04 2022- H 11 12 2025



Pneumonie enfant

- **Piège diagnostic:** douleur abdominale-respiration saccadée-évolution biphasique (surinfection virale)
- **Antibiothérapie au préalable**: cfr infections VRS antibiotique ne prévient pas les complications
- **Place Rx et biologie (CRP):** cutoff- dénivellation CRP
- **Antibiothérapie**

Etiologies of pneumonia in hospitalized children

- Most common Virus = **RSV**

- Most common Bacteria = **pneumococcus**
  (15 to 40% according to diagnostic technique used)

Incidence :

- Virus : ↓ with ↑ age
- Bacteria : % stable with ↑ age
- *Mycoplasma* and Chl pneumoniae: ↑ with ↑ age.

Harris M, et al. British Thoracic Society guidelines for the management of community acquired pneumonia in children: update 2011. Thorax 2011;66:ii 1-23

Table 5 Aetiology studies looking for atypical organisms

Reference [evidence level]	Age	Year and Setting	Tests	Total episodes	Mycoplasma, % (n)	Chlamydia, % (n)	Mixed, % (n)
Kurz[52] [II]	2 months–18 years	2006–7, Austria, IP	NPA culture PCR serology	112		6.7 (4 of 60 tested)	
Principi[53] [Ib]	2–14 years	1998–9, Italy, IP	Serology NPA PCR	418	35.8 (150)	11 (46)	6 (26)
Baer[54] [II]	1–18 years	1999–2000, Switzerland, IP	Serology NPA PCR	50	32 (16) 1–3 years: 22% >3–7 years: 35% >7 years: 40%	8 (4)	6 (3)
Somer[55] [II]	2 months–15 years	1996–8, Turkey, IP	Serology	140	27 (38)	5 (7)	?0
Korppi[56] [II]	<15 years	1981–2, Finland, IP+OP	Serology (updated from previous study)	201	30 (61) 0–4 years: 9% 5–9 years: 40% 10–14 years: 67%	14 (29) 6% 13% 35%	5 (10)

IP, inpatients; NPA PCR, nasopharyngeal PCR; OP, outpatients.

Présentation « classique »

	Bactérienne	Virale
Fièvre	+++	±
Début	abrupt	progressif
Toux	productive	Non- productive
IVRS	+/-	+
Wheezing	-	+
« Toxique »	++	+
RX thorax	segment/lobaire	interstitielle
Gl Blancs	> 15,000	< 15,000
CRP	+++	+/-
VS	+++	+/-

Clinical and radiographic clues to the etiology of pneumonia in children*

Etiology	Clinical features	Radiographic features
Bacteria (most commonly *Streptococcus pneumoniae*)	▪ Children of all ages ▪ Abrupt onset ▪ Ill-appearance ▪ Chills ▪ Moderate to severe respiratory distress ▪ Focal auscultatory findings ▪ Localized chest pain ▪ WBC count >15,000/microL (if obtained) ▪ Elevated acute phase reactants (if obtained)	▪ Alveolar infiltrates ▪ Segmental consolidation ▪ Lobar consolidation ▪ "Round" pneumonia Complications: ▪ Pleural effusion/empyema ▪ Lung abscess ▪ Necrotizing pneumonia ▪ Pneumatocele
Atypical bacterial (*Mycoplasma pneumoniae*, *Chlamydia pneumoniae*)	▪ Children of all ages (most common in children >5 years) ▪ Abrupt onset with constitutional findings (malaise, myalgia, headache, rash, conjunctivitis, photophobia, sore throat, headache) ▪ Gradually worsening nonproductive cough ▪ Wheezing ▪ Extrapulmonary manifestations or complications (eg, Stevens-Johnson syndrome, hemolytic anemia, hepatitis, etc)	Interstitial infiltrates
Viral	▪ Usually children <5 years ▪ Gradual onset ▪ Preceding upper airway symptoms ▪ Nontoxic appearing ▪ Diffuse, bilateral auscultatory findings ▪ Wheezing ▪ May have associated rash (eg, measles, varicella)	Interstitial infiltrates
Afebrile pneumonia of infancy (most commonly *Chlamydia trachomatis*)	▪ Usually in infants 2 weeks to 4 months ▪ Insidious onset ▪ Rhinorrhea ▪ Staccato cough pattern ▪ Peripheral eosinophilia (if CBC obtained)	Hyperinflation with interstitial process
Fungal	▪ Appropriate geographic or environmental exposure	Mediastinal or hilar adenopathy
Mycobacterium tuberculosis	▪ Children of any age ▪ Chronic cough ▪ Constitutional symptoms ▪ Exposure history	Mediastinal or hilar adenopathy

When should chest X-ray be performed?

- **Evidence statements**

Chest radiography is too insensitive to establish whether CAP is of viral or bacterial aetiology. [II]

- **Recommendations**
- Chest radiography should not be considered a routine investigation in children thought to have CAP. [A]
- Children with signs and symptoms of pneumonia who are not admitted to hospital should not have a chest x-ray. [A]
- A lateral x-ray should not be performed routinely. [B]
- Follow-up radiography is not required in those who were previously healthy and who are recovering well, but should be considered in those with a round pneumonia, collapse or persisting symptoms. [B+]

- Harris M, et al. British Thoracic Society guidelines for the management of community acquired pneumonia in children: update 2011. Thorax 2011;66:ii 1-23

Are biological tests useful?

- **Recommendations**

- Acute phase reactants are not of clinical utility in distinguishing viral from bacterial infections and should not routinely be tested. [A]

- CRP is not useful in the management of uncomplicated pneumonia. [A+]

- Harris M, et al. British Thoracic Society guidelines for the management of community acquired pneumonia in children: update 2011. Thorax 2011;66:ii 1-23

Place CRP

Journal of the Pediatric Infectious Diseases Society

ORIGINAL ARTICLE

Systematic Review and Meta-Analysis of Diagnostic Biomarkers for Pediatric Pneumonia

Lourdes Cynthia Gunaratnam,[1] Joan L. Robinson,[1,2,3,4,5] and Michael T. Hawkes[1,2,3,4,5]

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2021

Metaanalysis revealed that CRP and PCT best differentiated bacterial from viral pneumonia with CRP summary AUROC (area under the receiver operating characteristic curve) 0.71 (0.69-0.73), Youden index 53 mg/L, sensitivity 0.70 (0.68-0.78), and specificity 0.64 (0.58-0.68)

Table 7. Summary of Receiver Operating Characteristics Meta-Analysis

	AUROC	Sensitivity (Youden Index)	Specificity (Youden Index)	Youden Index
CRP	0.71 (0.69-0.73)	0.70 (0.68-0.78)	0.64 (0.58-0.68)	53 mg/L
PCT	0.70 (0.67-0.74)	0.69 (0.65-0.77)	0.64 (0.60-0.68)	0.59 ng/mL
WBC	0.57 (0.55-0.60)	0.63 (0.37-0.77)	0.48 (0.36-0.73)	13×10^9
ESR	0.61 (0.53-0.66)	0.60 (0.40-0.65)	0.61 (0.50-0.69)	31 mm/hr

Abbreviations: AUROC, area under the receiver operating characteristic curve; CRP, C-reactive protein; ESR, erythrocyte sedimentation rate; PCT, procalcitonin; WBC, white blood cells.

Seuil optimal

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C-reactive protein point-of-care testing and complementary strategies to improve antibiotic stewardship in children with acute respiratory infections in primary care

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10.3389/fped.2023.1221007

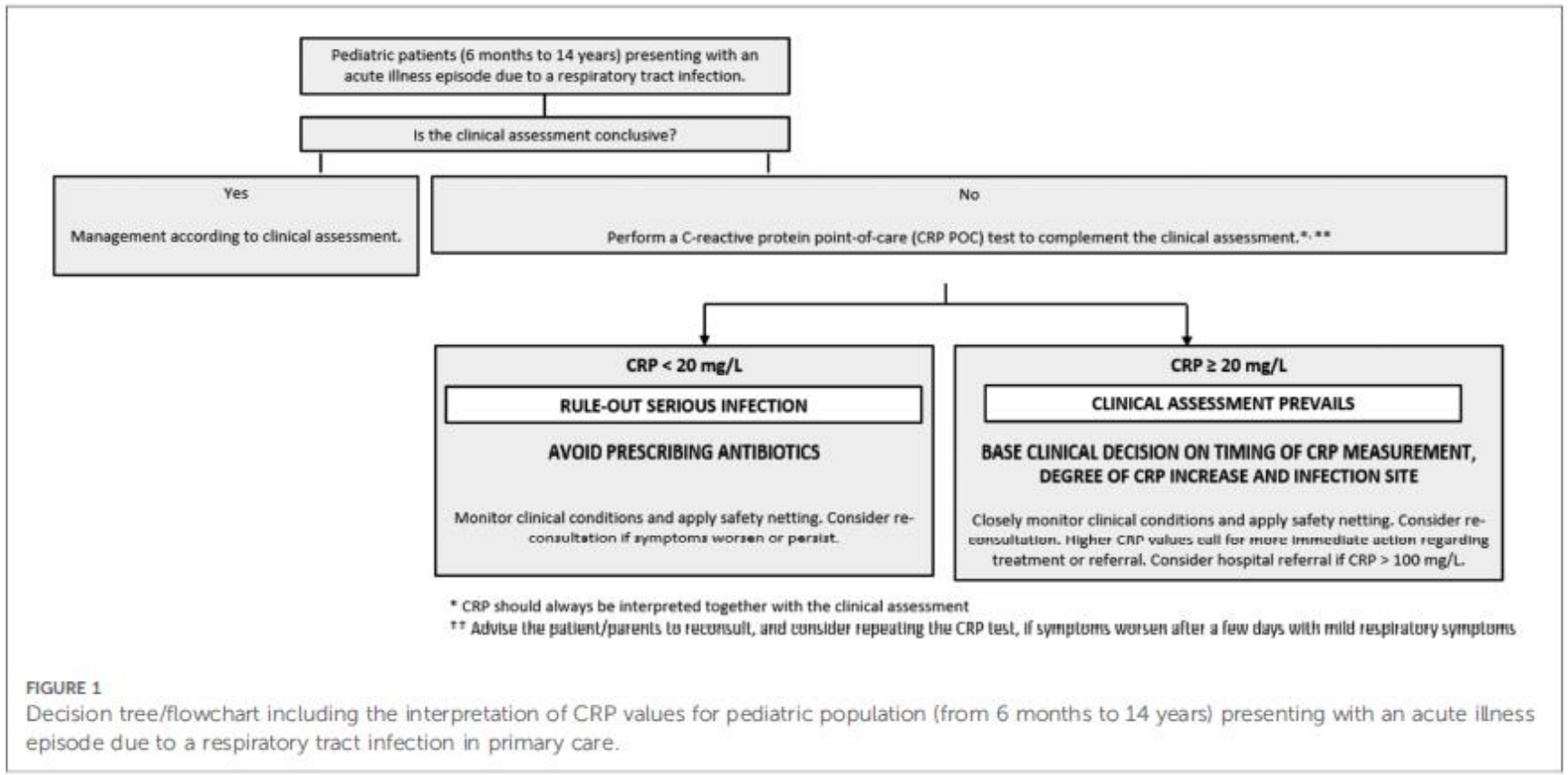


FIGURE 1
Decision tree/flowchart including the interpretation of CRP values for pediatric population (from 6 months to 14 years) presenting with an acute illness episode due to a respiratory tract infection in primary care.

For children with CRP values greater than or equal to 20 mg/L, the clinical assessment of the patient prevails, and CRP values can be used to complement clinical reasoning.

1. **The timing of the CRP measurement with regards to disease progression should be considered.**

✓ CRP values are less reliable as predictive indicators during the first 24 h after the onset of a disease, and serious (life-threatening) infections such as sepsis can develop within this time.

✓ In the primary care of children, early presentation is common, and in these cases any interpretation of CRP results should be considered carefully and the progression of clinical conditions should be closely monitored. In general, the CRP threshold of 5 mg/L is often exceeded within four to eight hours after an acute inflammatory event, with CRP values peaking at 20–500 mg/L after 48 h .

✓ Monitoring CRP over time can help differentiate serious infections from uncomplicated RTIs. If high CRP levels persist during the course of illness, further diagnostic workup should be considered to rule out serious infections.

For children with CRP values greater than or equal to 20 mg/L, the clinical assessment of the patient prevails, and CRP values can be used to complement clinical reasoning.

2. **The degree of elevation of CRP values should be considered**

◦ Higher CRP values indicate a greater urgency to act with regards to starting a course of treatment or referring to a hospital.

◦ Elevated CRP levels do not necessarily mean that antibiotics are a useful course of action, as inflammatory conditions and several viral infections can also increase CRP values in children . Be aware that a maximum CRP response with values above 40 mg/L is not infrequently found on days 3–4 in uncomplicated viral RTI .

◦ In cases of slightly elevated CRP values that exceed 20 mg/L with few clinical indications of a severe infection, clinicians may consider providing safety netting advice and prescribing symptomatic treatment for a specified period, with potentially a re-consultation if practically possible in case of exacerbation or persistence of symptoms.

◦ In cases of high CRP values (i.e.,: >75 mg/L) it is strongly suggested to start treatment with antibiotics, due to a high risk of a non-self-limiting infection, or to refer to a hospital. The child's guardians should monitor for an improvement of symptoms within a specified period of time, and if symptoms persist to arrange a re-consultation or present to a hospital.

◦ CRP levels exceeding 100 mg/L indicate a severe infection for which urgent referral to a hospital should at least be considered alongside thorough clinical assessment and history taking.

First line treatment in children > 3 months to adolescence

- **Presumed viral pneumonia:**

  - Observation

- **Presumed bacterial pneumonia:**

  - Mild or moderate CA pneumonia (ambulatory):

  - amoxi HD or cefuroxime PO (or Amoxi-clav HD)

  - Severe CA pneumonia (hospitalization):

  - Ampi HD or Pen HD or Amoxi-clav HD or cefuroxime HD IV/PO

Gabriel 30/12/2024

- Beyfortus en 12 2024

- J-4, pyrexie avec max de pic à 40. Qui répond aux antipyrétiques.
- J-1 le diagnostic d'hyperactivité bronchique a été fait mis sous ventolin.Un frottis de nez fait revenu négatif. Indication de contrôler oreille droite dans 24 h si persistance de la fièvre
- JO: 3° consultation- a présenté un épisode de fièvre à 39.5 avec frissons, cyanose péri buccale et des extrémites.

  T°38,5-Sat 89%-FC 199-FR30

Gabriel 30/12/2024

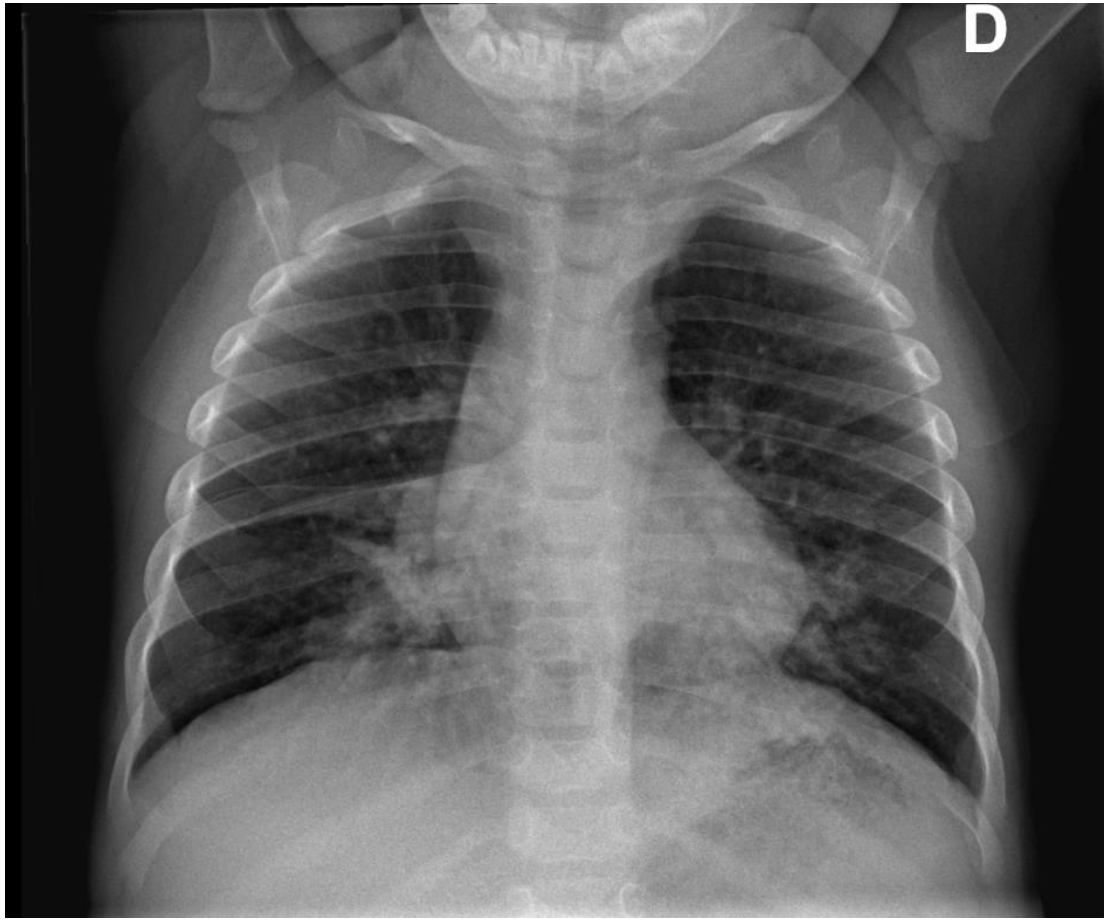
- Température durée 4j, frissons, épisodes de cyanose, diminution prise orale
- ANP: négative (adéno, RSV, influenza, COVID, Sciensano en cours)

Gabriel 30/12/2024

- Température durée 4j, frissons, épisodes de cyanose, diminution prise orale
- ANP: négative (adéo, RSV, influenza, COVID, Sciensano en cours)

SECTEURS:CH,HE_NUMERATION,HE_CYTOLOGIE,CH_AUTO,CH_CALCUL						
DONNEES CLINIQUES:						
MARQUEURS INFLAMMATOIRES						
CRP	+	216.39	mg/L	< 8.00	✔	08/12/2025 15:21 (V)
CYTOLOGIE HEMATOLOGIQUE						
HEMOGRAMME						
Hémoglobine	-	10.1	g/dL	10.5 - 13.5	✔	08/12/2025 14:46 (V)
Erythrocytes x 10^6		4.210	/µL	3.600 - 5.200	✔	08/12/2025 14:46 (V)
Hématocrite	-	30.7	%	36.0 - 44.0	✔	08/12/2025 14:46 (V)
M.C.V. (Volume globulaire moyen)		72.9	µm³	70.0 - 86.0	✔	08/12/2025 14:46 (V)
M.C.H. (Poids Hgb/GR)	-	24.0	pg	27.5 - 34.0	✔	08/12/2025 14:46 (V)
M.C.H.C. (Conc Hgb/GR)		32.9	g/dL	32.0 - 36.5	✔	08/12/2025 14:46 (V)
R.D.W.(Index d'anisocytose)	+	15.0	%	11.5 - 14.5	✔	08/12/2025 14:43 (V)
Leucocytes x 10³		13.41	/µL	6.00 - 15.00	✔	08/12/2025 14:46 (V)
Formule absolue						
Neutrophilie abs. x 10³	+	10.192	/µL	1.500 - 8.500	✔	08/12/2025 14:46 (V)
Lymphocytose abs. x 10³	-	1.636	/µL	4.000 - 10.500	✔	08/12/2025 16:56 (V)
Monocytose abs. x 10³	+	1.390	/µL	0.000 - 1.100	✔	08/12/2025 14:46 (V)
Eosinophilie abs. x 10³		0.130	/µL	0.000 - 0.700	✔	08/12/2025 14:46 (V)
Basophilie abs x 10³		0.05	/µL	0 - 0.2	✔	08/12/2025 14:46 (V)
Formule relative						
Neutrophiles	+	76.0	%	25.0 - 57.0	✔	08/12/2025 14:46 (V)
Lymphocytes	-	12.2	%	66.0 - 70.0	✔	08/12/2025 16:56 (V)
Monocytes		10.4	%	2.0 - 12.0	✔	08/12/2025 14:46 (V)
Eosinophiles		1.0	%	1.0 - 6.0	✔	08/12/2025 14:46 (V)
Basophiles		0.4	%	0.0 - 2.0	✔	08/12/2025 14:46 (V)
Plaquettes x 10³		330	/µL	200 - 400	✔	08/12/2025 14:46 (V)
M.P.V. (Volume plaquettaire moyen)	-	9.2	µm³	9.4 - 12.4	✔	08/12/2025 14:43 (V)

Gabriel 30/12/2024

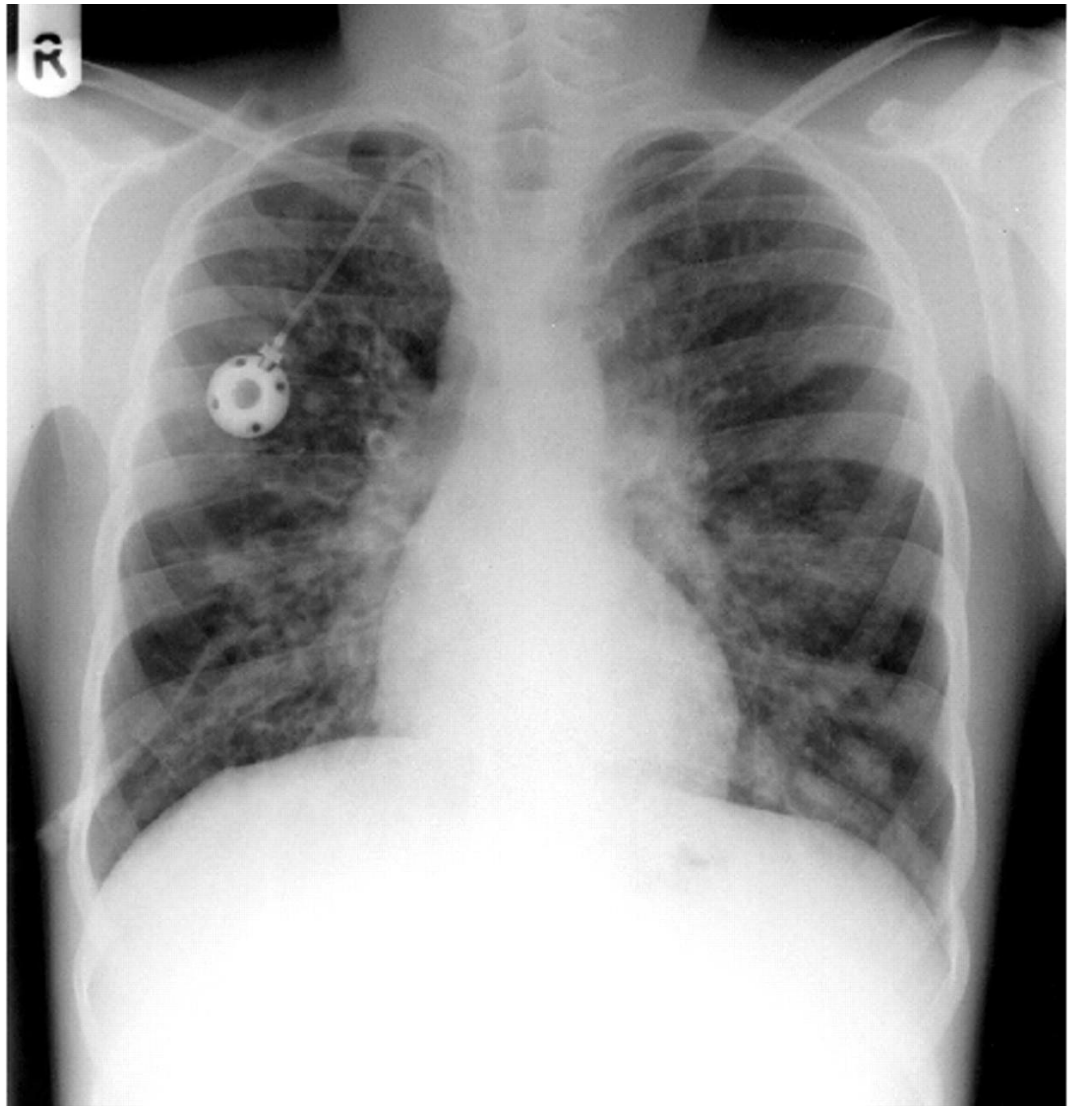


Étalement de la silhouette cardiomédiastinale, lié à la technique.
Infiltrat parenchymateux bi-basal, compatible avec un foyer, à confronter aux données biocliniques.
Plage de condensation en bande en para cardiaque droit, compatible une bande d'atélectasie.
Pas d'épanchement pleural.

O2-kiné- amoxy HD

Et le mycoplasme???

« Atypical » pneumonia



Gold standard

Fourfold increase in antibody titers

(paired sera)

But not practical in daily practice…

Gardiner et al. 2015

Treatment

- IDSA guidelines : use or macrolide = area needing additional research
- BTS : empiric treatment at any age if no response to bêta-lactam antibiotics or in the case of very severe disease
- Efficacy of macrolides ?

Treatment

PEDIATRICS®
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Treatment of Mycoplasma Pneumonia: A Systematic Review

Eric Biondi, Russell McCulloh, Brian Alverson, Andrew Klein, Angela Dixon and Shawn Ralston

Pediatrics 2014;133;1081; originally published online May 26, 2014;
DOI: 10.1542/peds.2013-3729

Treatment

- Systematic review (1996-2012)

- All observational and RCTs comparing
  - Anti – MP vs
  - Placebo or
  - Antibiotics for any other class (not active >< MP)

- Primary outcome
  - Clinical improvement or cure at follow-up

Conclusions

- Insufficient evidence for ML treatment for CA-LRTI due to MP
- Some major issues in this systematic review
  - Heterogeneity of studies (methodology)
  - Lack of uniformity in diagnosis
  - No consideration of potential coinfection
  - No studies took in consideration the duration of illness prior to start antibiotics

Treatment

- Macrolide = overprescribed antibiotic at pediatric clinics in USA > 6 million annual doses

- Cochrane review (2015)
  - Insufficient evidence about ML efficacy
  - One trial suggests ML may be efficacious is some children with LRTI (100% cure vs 77% at 1 month)

Gardiner et al. 2015

Treatment

Antibiotics for community-acquired lower respiratory tract infections secondary to *Mycoplasma pneumoniae* in children (Review)

Gardiner SJ, Gavranich JB, Chang AB

Gardiner et al. 2015

Treatment

Antibiotics for community-acquired lower respiratory tract infections secondary to *Mycoplasma pneumoniae* in children (Review)

Gardiner SJ, Gavranich JB, Chang AB

Insufficient evidence

THE COCHRANE COLLABORATION®

Gardiner et al. 2015

Macrolide resistance

- Since 2000
- MRMP strains
- Mutation in domain V of 23S rRNA
  - Reduced affinity of macrolides to the bacterial ribosome

CONCLUSIONS

- Carriage in asymptomatic children is a reality
- Diagnosis of MP infection remains challenging
  - PCR is not available in all settings
  - Impossible to differentiate between carriage and disease
  - Coinfection does exist
- When to treat ? In severe diseases ?
- Resistance exists
  - Still limited in Europe (including Belgium)
  - Diagnosis of resistance : even more challenging than diagnosis itself
  - Consider FQ (or TC) if severe resistant MP disease

Jules 04 07 2022

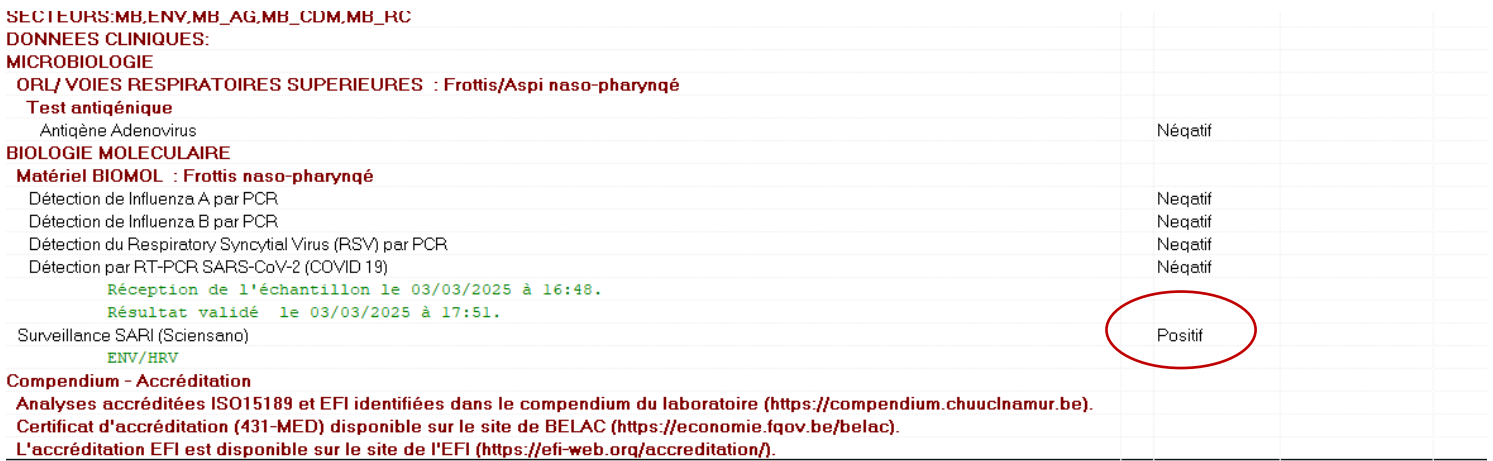
- ANTCDS: terme-2x aérosol- école 2,5 ans- pas antibio-pas animaux-pas de tabagisme-rare peluches

- 03 2025: H pour bronchite spastique- pas besoin O2-ANP négative

Jules 04 07 2022

- ANTCDS: terme-2x aérosol- école 2,5 ans- pas antibio-pas animaux-pas de tabagisme-rare peluches

- 03 2025: H pour bronchite spastique- pas besoin O2-ANP négative mais Sciensano PCR multiplex +



SECTEURS:MB,ENV,MB_AG,MB_CDM,MB_RC
DONNEES CLINIQUES:
MICROBIOLOGIE
ORL/ VOIES RESPIRATOIRES SUPERIEURES : Frottis/Aspi naso-pharynqé
Test antiqénique
Antiqène Adenovirus — Négatif
BIOLOGIE MOLECULAIRE
Matériel BIOMOL : Frottis naso-pharynqé
Détection de Influenza A par PCR — Negatif
Détection de Influenza B par PCR — Negatif
Détection du Respiratory Syncytial Virus (RSV) par PCR — Negatif
Détection par RT-PCR SARS-CoV-2 (COVID 19) — Négatif
Réception de l'échantillon le 03/03/2025 à 16:48.
Résultat validé le 03/03/2025 à 17:51.
Surveillance SARI (Sciensano) — Positif
ENV/HRV
Compendium - Accréditation
Analyses accréditées ISO15189 et EFI identifiées dans le compendium du laboratoire (https://compendium.chuuclnamur.be).
Certificat d'accréditation (431-MED) disponible sur le site de BELAC (https://economie.fqov.be/belac).
L'accréditation EFI est disponible sur le site de l'EFI (https://efi-web.org/accreditation/).

Jules 04 07 2022

- ANTCDS: terme-2x aérosol- école 2,5 ans- pas antibio-pas animaux-pas de tabagisme-rare peluches-pas eczéma
- 03 2025: 1° H pour bronchite spastique- pas besoin O2-

  Ventolin SN puff (4 puffs en 1 x max 4 x par jour)

  TAC négatifs
- 10 2025: 2° H pour bronchite spastique besoin en O2

  conseil Ventolin-Flixotide 2-2

Jules 04 07 2022

- ANTCDS: terme-2x aérosol- école 2,5 ans- pas antibio-pas animaux-pas de tabagisme-rare peluches-pas eczéma
- 03 2025: 1° H pour bronchite spastique- pas besoin O2-
  Ventolin SN puff (4 puffs en 1 x max 4 x par jour)
  TAC négatifs
- 10 2025: 2° H pour bronchite spastique besoin en O2
  conseil Ventolin-Flixotide 2-2
- 11 2025: 3° H- besoins O2-medrol

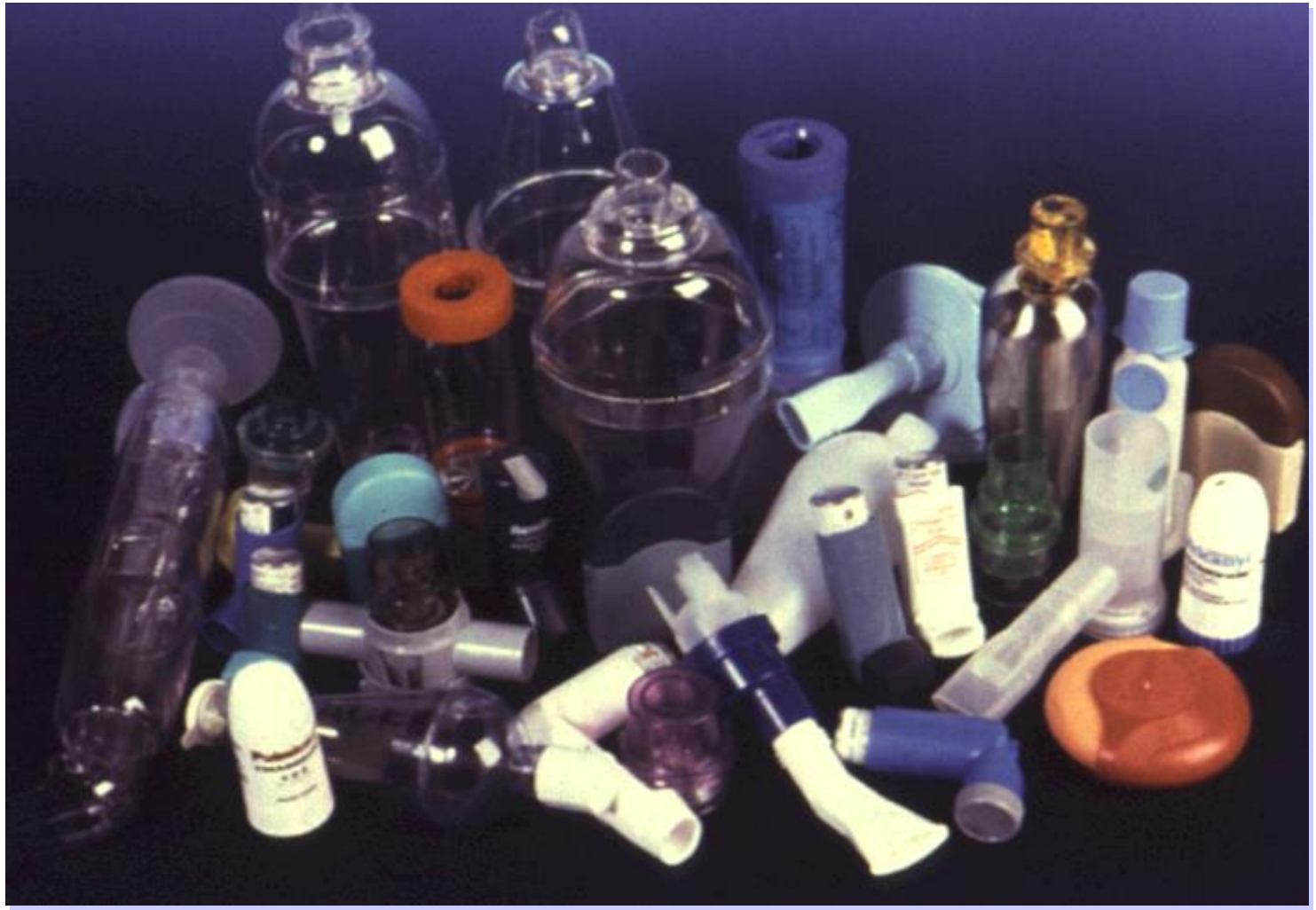
Jules 04 07 2022

- ANTCDS: terme-2x aérosol- école 2,5 ans- pas antibio-pas animaux-pas de tabagisme-rare peluches-pas eczéma
- 03 2025: 1° H pour bronchite spastique- pas besoin O2-
  Ventolin SN puff (4 puffs en 1 x max 4 x par jour)
  TAC négatifs
- 10 2025: 2° H pour bronchite spastique besoin en O2
  conseil Ventolin-Flixotide 2-2
- 11 2025: 3° H- besoins O2-medrol- Rx thorax nl- biologie nl (Ig E – RAST- dosage Ig)
  Flutiform 5/50: 2x2 par jour

Thérapie inhalée

- = administration topique médication en suspension ou en solution dans gaz
- = maximiser effets thérapeutiques
- = minimiser effets 2^{aires}

Que choisir ??



NEBULISEUR

Avantages	Inconvénients
Pas de coordination nécessaire	Difficilement transportable
Indépendant de la fréquence respiratoire	Source de gaz (ou d'électricité) nécessaire
Pour toutes les catégories d'âge	Entretien strict obligatoire
Convient pour les situations aigües	Durée d'administration longue
Administration d'O2 possible	Incompatibilité avec certains médicaments
Administration combinée de plusieurs médications possibles	Pas de dose précise possible Coûteux

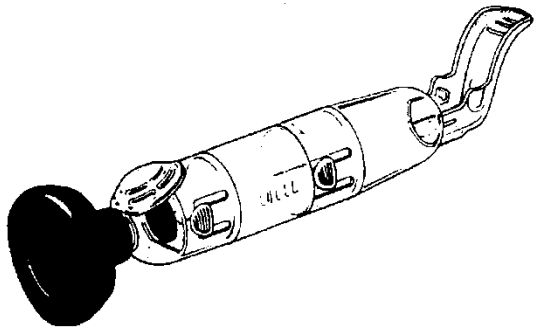
AEROSOL DOSEUR PRESSURISE

Avantages	**Inconvénients**
Compact	Coordination main-bouche nécessaire
Dose et diamètre particulaire	**(sauf si chambre d'inhalation)**
indépendants manœuvre d'inhalation	Pas indiqué en dessous 12 ans
Convient pour les situations aigües	**(sauf si chambre d'inhalation)**
Durée d'administration courte	Peu de contrôle sur la quantité
Disponible pour la plupart des	de médicament restante
médications antiasthmatiques	Gaz propulseur nécessaire
	Importante déposition oropharyngée
	(sauf si chambre d'inhalation)

INHALATEUR A POUDRE SECHE

Avantages	**Inconvénients**
Petit et facile à emporter	Débit inspiratoire élevé nécessaire
Déclenché par la respiration	Pas indiqué avant 6 ans
Coordination moins nécessaire	Pas indiqué dans les situations aigües
Durée d'administration courte	Relativement sensible à l'humidité
Disponible pour la plupart des médications antiasthmatiques	Déposition oropharyngée non négligeable

pMDI + SPACER: ADVANTAGES



- Aerosol remains 3-5 sec suspended in spacer
  - less actuation-inhalation coordination problems
- Requires less active cooperation
  - usable during normal breathing
  - can be used with a mask (younger children)
- The larger (non-respirable) particles deposit in spacer

  → less oropharyngeal deposition
- Lower drug and personel cost as compared to nebulisers

Asthme


GLOBAL INITIATIVE FOR ASTHMA
2025
Global Strategy for Asthma Management and Prevention
Updated November 2025
©2025 Global Initiative for Asthma

Hyperréactivité viro induite

KEY POINTS

The following principles apply to children aged 5 years and younger with a diagnosis of asthma (see Section 10).

- The goals of asthma management in young children are similar to those in older patients:
  - To achieve best possible control of symptoms and maintain normal activity levels
  - To minimize the risk of asthma flare-ups, impaired lung development and medication side-effects.
- Day-to-day asthma symptoms should be treated with inhaled short-acting beta$_2$-agonist (SABA) as reliever.
- Daily ~~controller therapy should be initiated~~ in children with asthma symptoms more than twice a week, or ~~with~~ one ~~or more~~ severe exacerbations requiring unscheduled medical care in the previous year. The preferred controller option is daily treatment with inhaled corticosteroids (ICS).
- Response to treatment should be reviewed before deciding whether to continue it or change it. If a clinical response is absent or incomplete, reconsider inhaler technique, adherence, modifiable risk factors, alternative diagnoses and comorbidities that may be contributing to exacerbations or respiratory symptoms.
- If there is a good response to ICS for 2–3 months, a dose reduction should be considered.
- The choice of inhaler device should be based on the child's age and capability. The preferred device is a pressurized metered-dose inhaler (pMDI) via spacer, with face mask for children <3 years and mouthpiece for most children aged 3–5 years. Children should be switched from a face mask to mouthpiece as soon as they can demonstrate good technique. Inhaler technique should be repeatedly assessed and corrected when necessary.
- Education and an individualized written action plan should be provided to parents/caregivers.
- The need for asthma treatment should be reassessed periodically, since symptoms may fluctuate and asthma-like symptoms remit in many young children. If remission occurs, advise parents/caregivers that asthma symptoms will often return later in life.

Ventolin 1 puff/3kg-max 10-max –
4 x par jour –**en 1 prise**

Fluticonazole 50 µgr-2x2 /j **en prises séparées**

Ou association

Flutiform® 5/50(formotérol + fluticonazole) 2x2

Sérétide® 25/50 (salmétérol + fluti) 2x2
Durant2 mois

FR allergie selon AF, eczéma
Discuter TAC
Rx thorax

Posologies: en aigu

- Salbutamol (Ventolin®)

-aérosol (20 gouttes/ml): 0,03 ml/kg (min 5 gouttes)

-inhalé: 1 puff/3kg –max 10 en 1 prise

- Prednisone: 1 à 2 mgr/kg (3 à 5 jours)

Clément – 16 ans-

Antécédents :

Personnels :

Abcès pulmonaire LSD en 2013 (4 ans) Prevotella-dosage Ig nl

- Dosage des immunoglobulines dans les normes en 2013 avec IgG totale à 7.8 g/L

-Suivi ORL depuis mai 2016 par Dr Grevisse Véronique. OSM à répétition avec déficit de l'audition. Pose à multiples reprises de DTT : 05/04/2017 (avec adénoïdectomie) , 14/03/2018, 10/07/2019 et en 05/2020.

Bilan immunitaire 06/2020 révélant **un déficit immunitaire commun variable** dans le décours d'une pneumonie lobaire droite associée à un contexte de fièvre récidivante. :

- hypogammaglobulinémie (Ig G 2.52, Ig A < 0. 04 et iG m 0.04)

- Typage lymphocytaire normal

- CH50 dans les normes

- Sérologies vaccinales : pas de réponse rougeole (RRO le 31/01/2020), pas de réponse hépatite B, IgG tétanos 0.13 (rappel Tétravac le 10/10/2013), pas de réponse du pneumo 23 (ration <1 pour les 5 sérotypes) (pré-vaccin dosés le 21/06 et post-vaccin dosés le 19/07/21).

- **Première cure IVIG** le 23/06/2020 stoppé en 02/2021. Reprise des cures le 19/07/21 car chute des gammaglobulines à l'arrêt.

Clément – 16 ans-

18 02 2025:

- Il s'est présenté ce jour aux urgences sous conseil de son médecin traitant :
- Depuis 1 semaine : pyrexie avec frissons (thermomètre non fonctionnel au domicile donc pas de valeurs de température objectivée) associée à une toux sèche, des céphalées frontales en barre fluctuantes, une rhinorrhée et un encombrement nasal.
- Depuis 5 jours : diminution progressive de l'appétit, pâleur cutanée, fatigue intense et voix rauque.

- Son médecin traitant l'envoie aux urgences pour exclure une surinfection pulmonaire et réalisation d'un bilan.

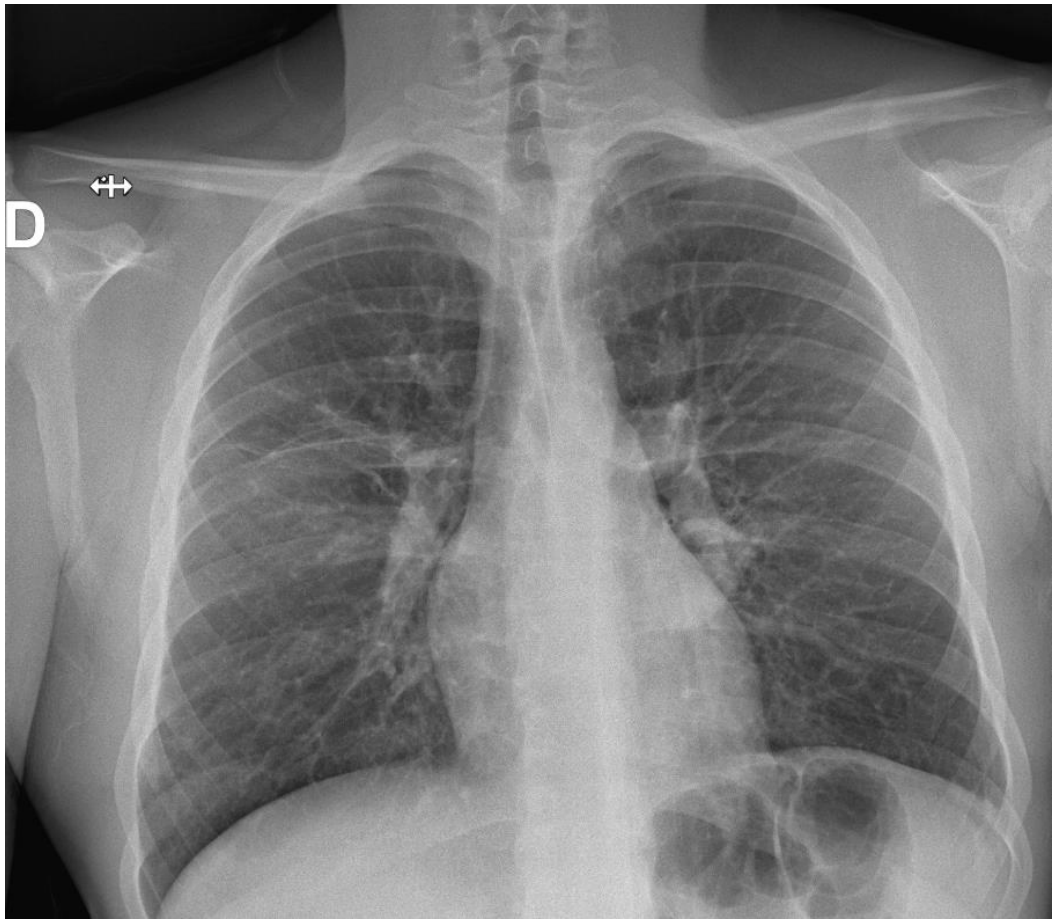
Clément – 16 ans-

SECTEURS:CH,HE_NUMERATION,HE_CYTOLOGIE,CH_AUTO,CH_CALCUL						
DONNEES CLINIQUES:						
CRP/VS						
CRP	+	**154.03**	mg/L	< 5.00	✔	18/02/2025 20:06 (V)
CYTOLOGIE HEMATOLOGIQUE						
HEMOGRAMME						
Hémoglobine		14.9	g/dL	11.7 - 17.0	✔	18/02/2025 19:31 (V)
Erythrocytes x 10^6		4.940	/µL	4.000 - 5.400	✔	18/02/2025 19:31 (V)
Hématocrite		42.4	%	36.0 - 47.0	✔	18/02/2025 19:31 (V)
M.C.V. (Volume globulaire moyen)		85.8	µm³	76.0 - 96.0	✔	18/02/2025 19:31 (V)
M.C.H. (Poids Hgb/GR)		30.2	pg	27.5 - 34.0	✔	18/02/2025 19:31 (V)
M.C.H.C. (Conc Hgb/GR)		35.1	g/dL	32.0 - 36.5	✔	18/02/2025 19:31 (V)
R.D.W.(Index d'anisocytose)		11.7	%	11.5 - 14.5	✔	18/02/2025 19:30 (V)
Leucocytes x 10³		8.61	/µL	3.90 - 9.90	✔	18/02/2025 19:31 (V)
Formule absolue automatisée						
Neutrophilie abs. x 10³		5.915	/µL	1.800 - 6.300	✔	19/02/2025 00:11 (V)
Lymphocytose abs. x 10³		1.696	/µL	1.000 - 4.000	✔	19/02/2025 00:11 (V)
Monocytose abs. x 10³		0.980	/µL	0.200 - 1.000	✔	19/02/2025 00:11 (V)
Eosinophilie abs. x 10³		0.000	/µL	0.000 - 0.700	✔	19/02/2025 00:11 (V)
Basophilie abs x 10³		0.02	/µL	0 - 0.2	✔	19/02/2025 00:11 (V)
Formule relative automatisée						
Neutrophiles	+	**68.7**	%	48.0 - 65.0	✔	19/02/2025 00:11 (V)
Lymphocytes	-	**19.7**	%	25.0 - 40.0	✔	19/02/2025 00:11 (V)
Monocytes		11.4	%	2.0 - 12.0	✔	19/02/2025 00:11 (V)
Eosinophiles	-	**0.0**	%	1.0 - 6.0	✔	19/02/2025 00:11 (V)
Basophiles		0.2	%	0.0 - 2.0	✔	19/02/2025 00:11 (V)
Plaquettes x 10³		289	/µL	150 - 450	✔	18/02/2025 19:31 (V)
M.P.V. (Volume plaquettaire moyen)		11.0	µm³	9.4 - 12.4	✔	18/02/2025 19:30 (V)

Clément – 16 ans-

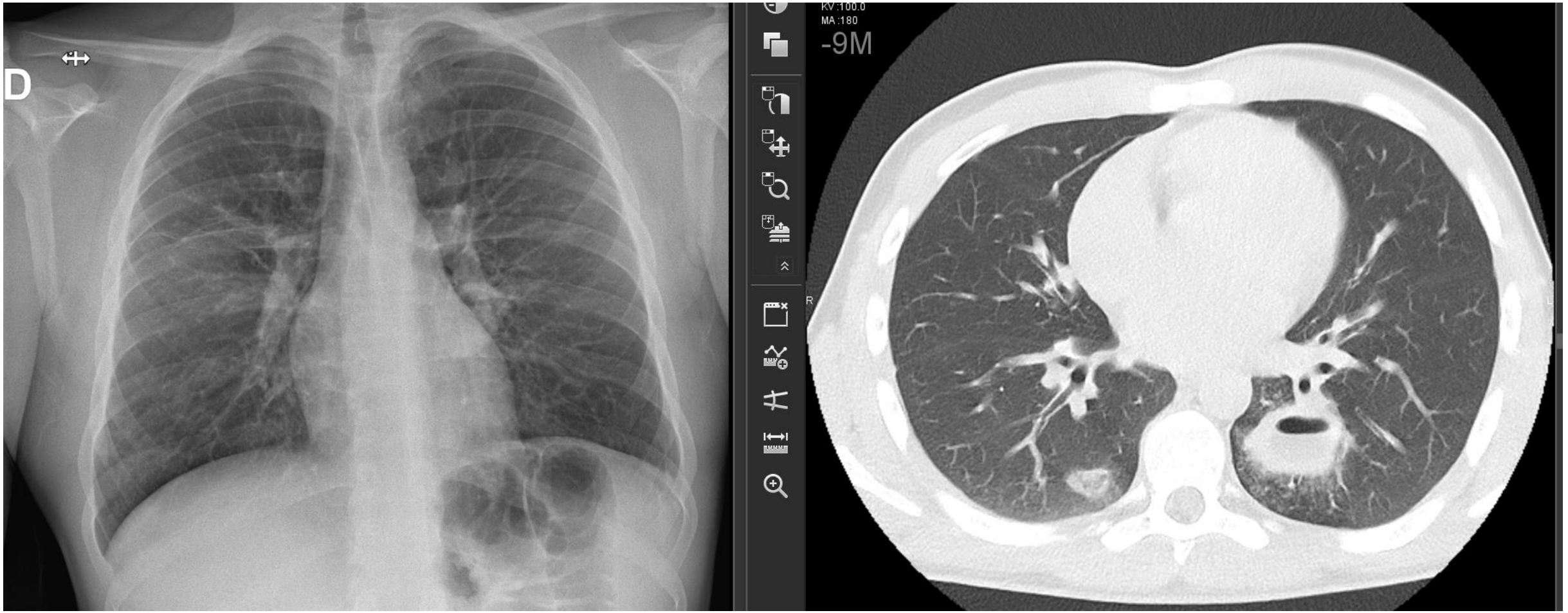
BIOLOGIE MOLECULAIRE		
Matériel BIOMOL : Frottis naso-pharyngé		
Détection de Influenza A par PCR		Negatif
Détection de Influenza B par PCR	+	**Positif**
Détection du Respiratory Syncytial Virus (RSV) par PCR		Negatif
Détection par RT-PCR SARS-CoV-2 (COVID 19)		Négatif
Réception de l'échantillon le 18/02/2025 à 19:30.		
Résultat validé le 18/02/2025 à 20:49.		
Surveillance SARI (Sciensano)		Positif
FLU B		

Clément – 16 ans-



RX thorax. Motif : toux depuis une semaine.
Résultats :
Pas de cardiomégalie.
Mise en évidence d'une surdensité avec possible niveau hydroaérique rétrohilaire gauche
de 41 x 37 mm.
À bilanter par par CT

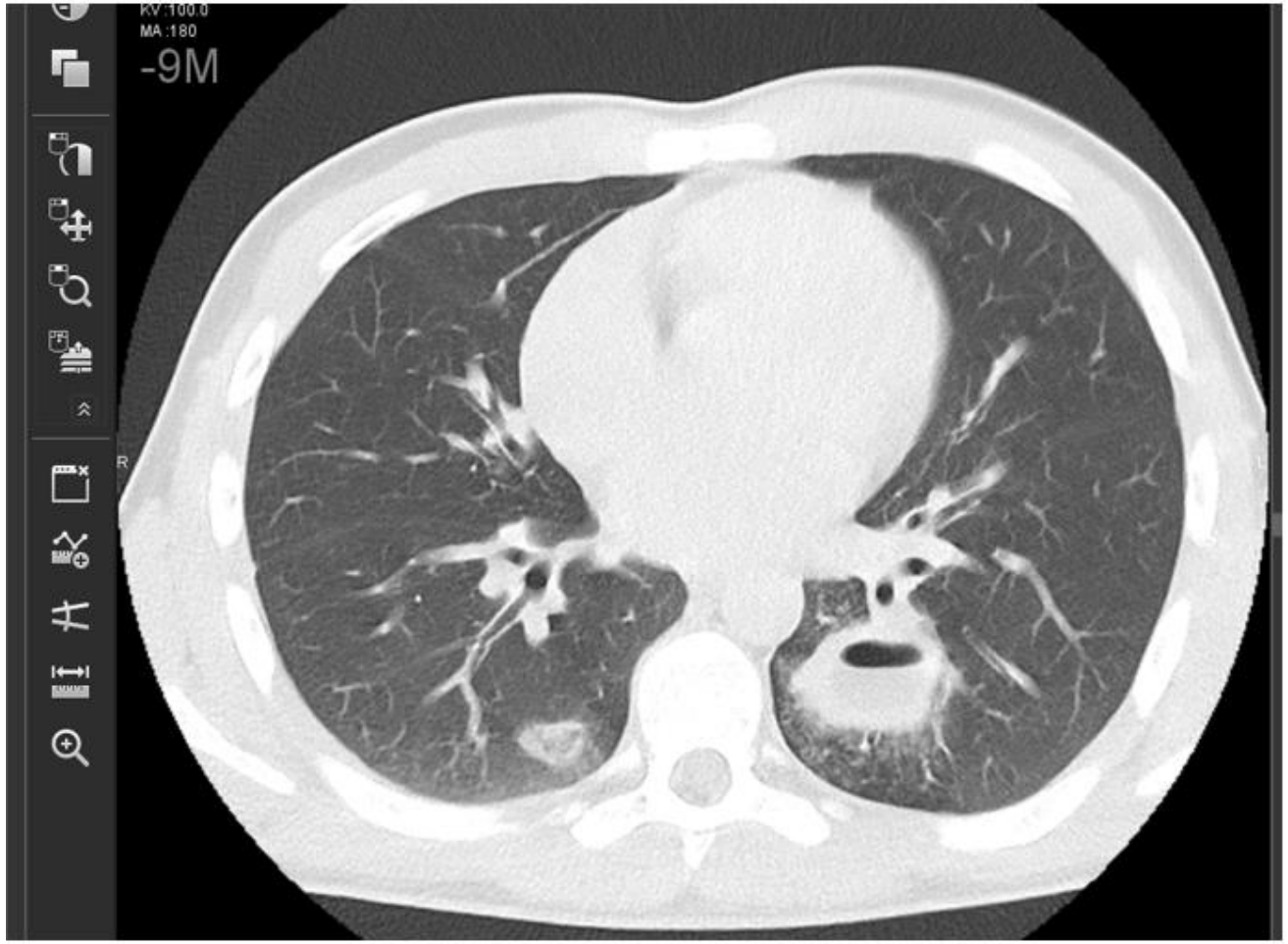
Clément – 16 ans-



Clément – 16 ans-

Cavité apical du LIG avec niveau hydroaérique : **abcès en première hypothèse**, une atteinte par des germes opportunistes est possible (pneumocystis, tuberculose, aspergillose).

Foyer de bronchiolopathie lobaire supérieur gauche, ainsi que de pneumopathie à prédominance en verre dépoli lobaire inférieur bilatéral : **pneumopathie de infectieux/inflammatoire en première hypothèse hypothèse.**



Clément – 16 ans-

Conclusion :

Adolescent de 16 ans et 10 mois ans hospitalisé en Pédiatrie du 18/02 au 14/03/2025 pour :

- Infection à Influenza A dans un contexte de déficit immunitaire commun variable.
- Hypogammalobulinémie : cure de privigen 30g administrée durant l'hospitalisation (20/02/2025 et 11-12/03/2025).

- Surinfection pulmonaire avec présence d'un abcès au niveau de la cavité apicale du lobe pulmonaire inférieur gauche.

- Traitement par Amoxicilline-clavulanate 6g/jour en 3 prises IV du 18/02 au 13/03/2025. Relais PO par augmentin 875 mg 3x/jour pour une durée de deux semaines.

- Oxygénothérapie du 20/02 au 21/02/2025.

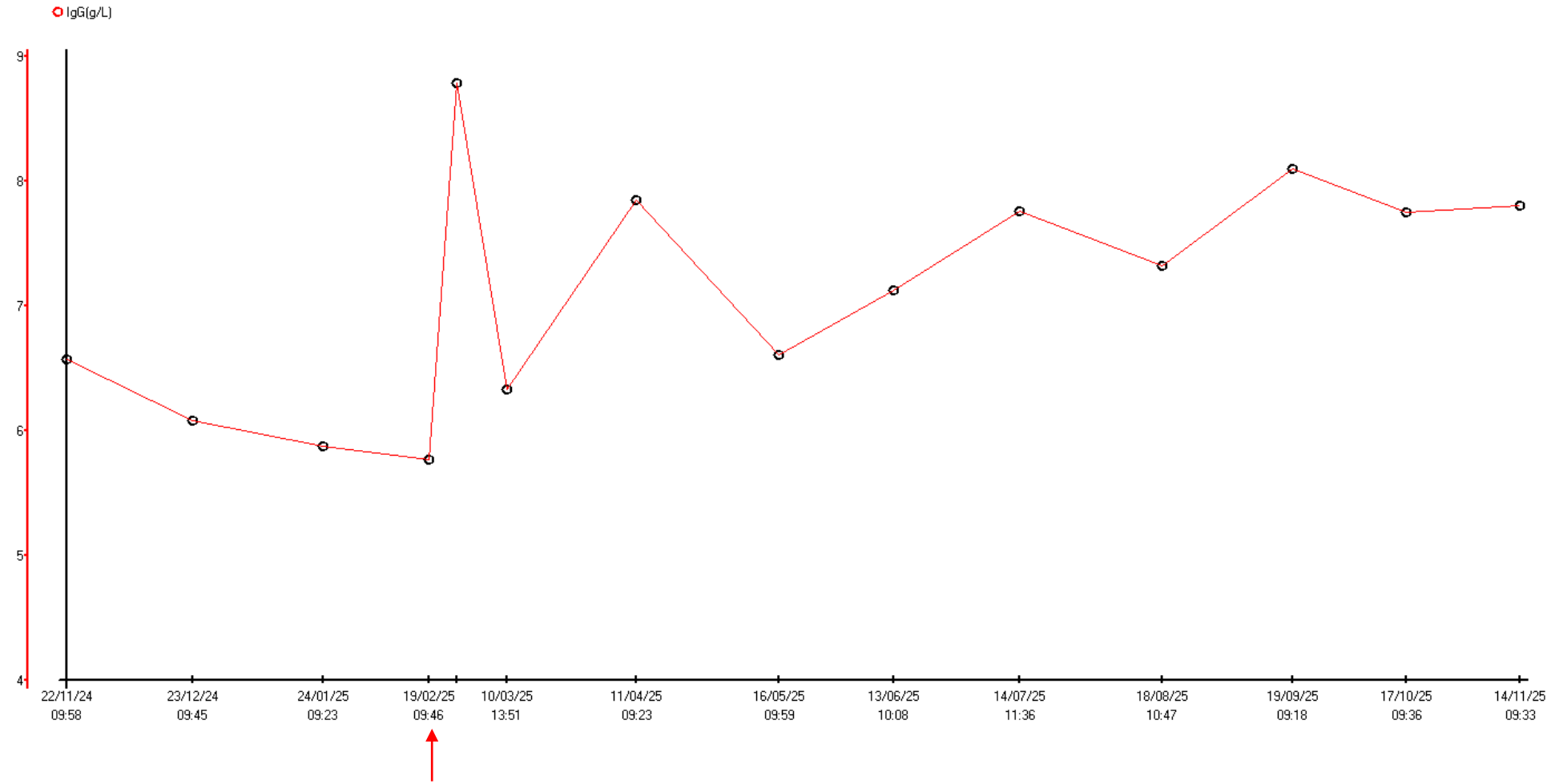
- Thrombose veineuse profonde proximale du membre inférieur droit

- Instauration d'un traitement par Eliquis pour une durée de 3 mois.

- Séances de kiné de mobilisation

Clément – 16 ans-

Pas eu vaccin grippe malgré plusieurs rappels



Abcès pulmonaire 2° grippe

Conseil
Supérieur de la Santé

Vaccination contre la grippe saisonnière
Saison hivernale 2025 - 2026

Juillet 2025
N° 9879

III RECOMMANDATIONS

Le CSS recommande la vaccination contre la grippe saisonnière pour la saison hivernale 2025 - 2026 à partir de la mi-octobre (en fonction de la disponibilité des vaccins) pour les personnes listées ci-dessous (groupe 1, 2 et 3) :

Groupe 1 : les personnes présentant un risque de complications liées à la grippe

- toute personne de 65 ans et plus ;
- toutes les personnes séjournant en institution ;
- tout patient à partir de l'âge de 6 mois présentant une affection chronique sous-jacente, même stabilisée, d'origine pulmonaire (incluant l'asthme sévère[2]), cardiaque (excepté l'hypertension), hépatique, rénale, métabolique (incluant le diabète), neuromusculaire ou des troubles immunitaires (naturels ou induits) et toute personne avec un indice de masse corporelle (BMI) ≥ 40 ;
- les enfants de 6 mois à 18 ans qui sont sous thérapie à l'aspirine au long cours ;
- toutes les femmes enceintes quel que soit le stade de grossesse (CSS 8754).

Recommandation spécifique pour les vaccins renforcés chez les personnes âgées de 65 ans et plus :
Pour toutes les personnes âgées de 65 ans et plus, il est recommandé de préférer un vaccin antigrippal renforcé (adjuvanté ou à haute dose) aux vaccins à dose standard.

Groupe 2 : tous les travailleurs du secteur de soins de santé
Ce groupe comprend toutes les catégories socioprofessionnelles listées dans l'avis CSS 9611 de septembre 2020 (annexe 1). Dans les études d'observation, il a été démontré que la vaccination du personnel de santé et des colocataires réduisait la transmission aux personnes à risque, entraînant une diminution d'*Influenza-Like Illness* (ILI) et des complications, comme en témoignent les études montrant une diminution de la mortalité et des visites médicales chez les résidents des maisons de retraite lorsque le personnel est vacciné (Pearson et al, 2006).

Groupe 3 : les personnes vivant sous le même toit (stratégie de vaccination *cocoon)*[3]

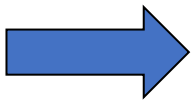
- des personnes à risque du groupe 1 (excepté pour l'entourage des femmes enceintes vaccinées avant l'accouchement) ;
- des enfants de moins de 6 mois dont les mères n'ont pas été vaccinées contre la grippe pendant la grossesse.

Pour les personnes âgées de 18 à 65 ans, une proposition de vaccination est faite sur une base individuelle après consultation du médecin. Une attention particulière doit être portée aux personnes qui sont obèses (Neidich et al, 2017), âgées de 50 à 65 ans (Baxter et al, 2010 ; Nguyen et al, 2023) qui fument (Han et al, 2019 ; Lawrence et al, 2019) ou consomment de l'alcool de manière excessive (CSS 9438 ; Greenbaum et al, 2014).

4.3 Dose de vaccins

Vaccins à dose standard (Alpharix®, Influvac®, Vaxigrip®)

- Les adultes et les enfants de plus de 6 mois reçoivent une dose de 0,5 ml.



- Chez les enfants de moins de 9 ans qui n'ont pas été vaccinés auparavant contre la grippe, une deuxième dose doit être administrée après un intervalle d'au moins 4 semaines.

Vaccin à dose standard avec adjuvant (Fluad®)

- Les adultes âgés de 50 ans et plus reçoivent une dose de 0,5 ml.

Vaccin à haute dose (Efluelda®)

- Les adultes âgés de 60 ans et plus reçoivent une dose de 0,7 ml.

Superior Health Council

VACCINATION OF IMMUNOCOMPROMISED OR CHRONICALLY ILL CHILDREN AND/OR ADULTS

SEPTEMBER 2019
SHC № 9158

2. VACCINATING IMMUNOCOMPROMISED INDIVIDUALS

2.1. Children < 16 years

VACCINES	DISORDERS								
	IMID on ISD	PRIOR to SOT	AFTER SOT	Oncology	PRIOR to HSCT	AFTER HSCT	HIV CD4 < 15%	HIV CD4 ≥ 15%	Severe PID
INACTIVATED VACCINES									
DTPa dTpa	S	S	S	S	S	A DTPa only	S	S	S
IPV	S	S	S	S	S	A	S	S	S
Haemophilus influenzae b	S	S	S	S	S	A	S	S	S
Hepatitis A	R	A**	R	R	R	R	R	R	R
Hepatitis B	S	S	S	S	S	A	S	S	S
Influenza	A	A	A	A	A	A	A	A	A
Pneumococcal PCV13	S	S	S	S	S	A	S	S	S
Pneumococcal PPV23	A	A	A	A	A	A	A	A	A
Meningococcal ACWY (conjugate)	S	S	S	S	S	A	S	S	S
Men B	A	A	A	A	A	A	R	R	A
HPV	S	S	S	S	S	A	S	S	S

LEGEND:

S	**Standard** indication for vaccination because this concerns routine vaccinations that are part of the basic vaccination schedule that holds for the general population.
A	**Strongly Advised**, given the additional risk posed by increased susceptibility and/or increased severity, and/or increased risk from complications
R	To consider in case of **epidemiological or personal Risk**
CI	**Contra-Indicated**
NA	**Not Applicable**
*	> 24 months post HSCT in absence of immunosuppressive therapy and/or GVHD
**	Only in chronic liver disease
***	not available yet in Belgium (because available elsewhere)
#	after consultation with a specialist (in case of epidemiological or personal risk)

2. Predominantly Antibody deficiencies

a. Severe (e.g. X linked agammaglobulinemia, common variable immune deficiency (CVID), hyperIgM)
   i. Contra indication for live vaccines in XLA and patients with CVID and hyperIgM associated with severe lymphopenia.
   ii. Inactivated vaccines can be safely given, but probably less efficacious (not efficacious in XLA)
   iii. Annual influenza vaccine highly recommended, even in patients receiving IVIG/SCIG as immunoglobulin preparations may not contain antibodies to the circulating strains

b. Mild (e.g. Isolated hypogammaglobulinemia, IgG subclass deficiency, specific antibody deficiency (SPAD), selective IgA deficiency, transient hypogammaglobulinemia of infancy)
   i. No contraindication for live vaccines (except for oral polio vaccine), actively recommended
   ii. No safety concern for inactivated vaccines, highly recommended
   iii. Annual inactivated influenza vaccine, highly recommended

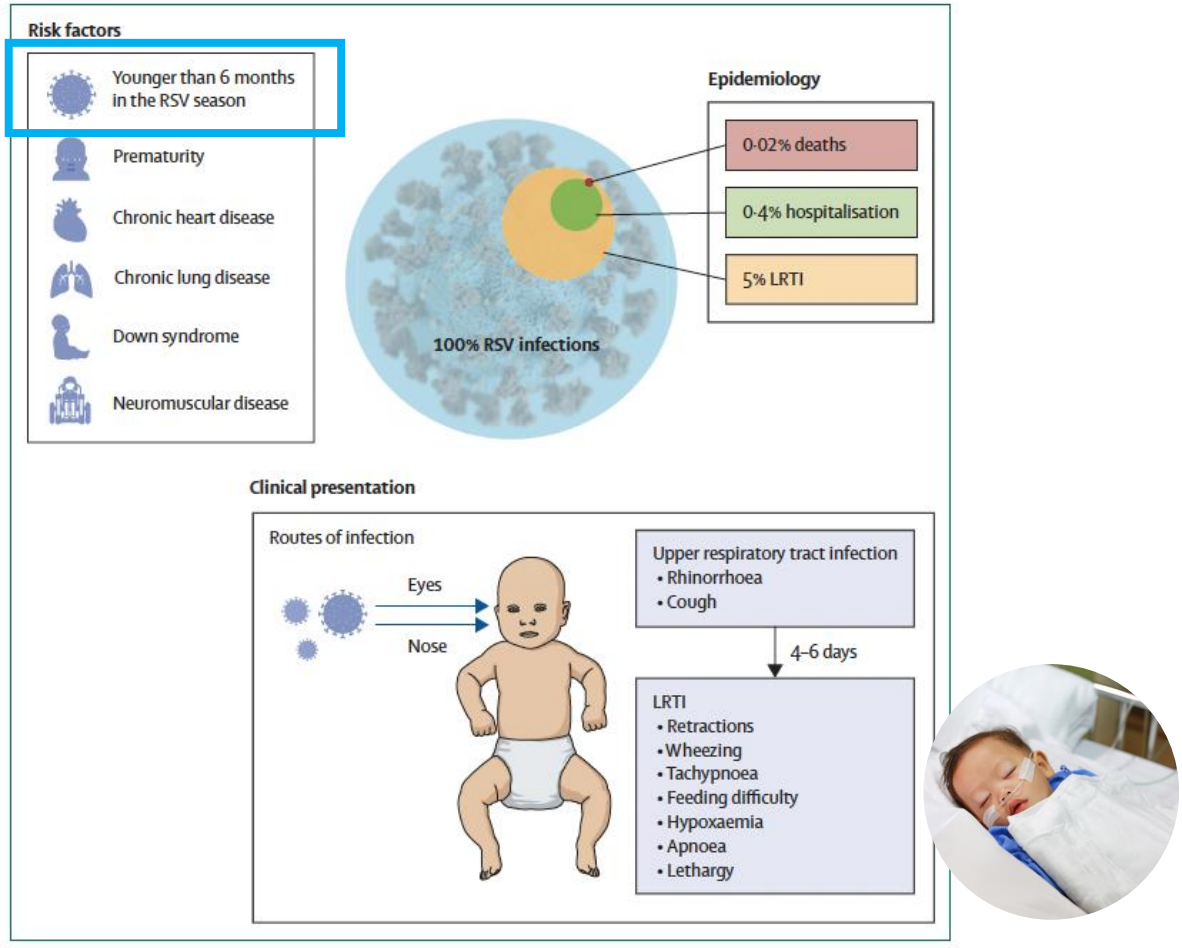
	Children < 16 years	**Adults and teenagers ≥ 16 years**
Patients on intravenous / subcutaneous immunoglobulin replacement therapy (IVIG/SCIG)	Recommended • **Influenza vaccine** (annually); • No contra-indication for administration of inactivated vaccines. • Possible interference of immune response after vaccination with some live vaccines (varicella, measles and rubella). • No interference with yellow fever vaccine. When administering IVIG/SCIG, there should, if possible, be a 6 to 8 month waiting period (after ending IVIG/SCIG treatment) before offering these live, vaccines in order to obtain a proper immune response. If persistent replacement is required for the patient, a 6 month waiting period is not possible. In addition, these patients will always develop but a weak antibody response themselves. In such cases, a waiting period of 3-4 weeks may be applied.	Recommended • **Influenza vaccine** (annually) • No contra-indication for administration of inactivated vaccines. • Possible interference of immune response after vaccination with some live vaccines (varicella, measles and rubella). • No interference with yellow fever vaccine. When administering IVIG/SCIG, there should, if possible, be a 6 to 8 month waiting period (after ending IVIG/SCIG treatment) before offering these live, vaccines in order to obtain a proper immune response. If persistent replacement is required for the patient, a 6 month waiting period is not possible. In addition, these patients will always develop but a weak antibody response themselves. In such cases, a waiting period of 3-4 weeks may be applied.

* *a small risk of relapse of MS after a yellow fever vaccination can't be ruled out.*

RSV

RSV infection:

Effets à court terme



Mazur NI et al *Lancet* 2024 (9 September) doi.org/10.1016/S2213-2600(24)00290-X

Effets long terme

- Hyper réactivité bronchique
- wheezing, asthme

-90 à 100% enfants infectés < 2ans
-principal FR sévérité : < de 6 mois
-risque accru infection invasive pneumocoque
-suroccupation des services de pédiatrie

-14 à 32% consultations

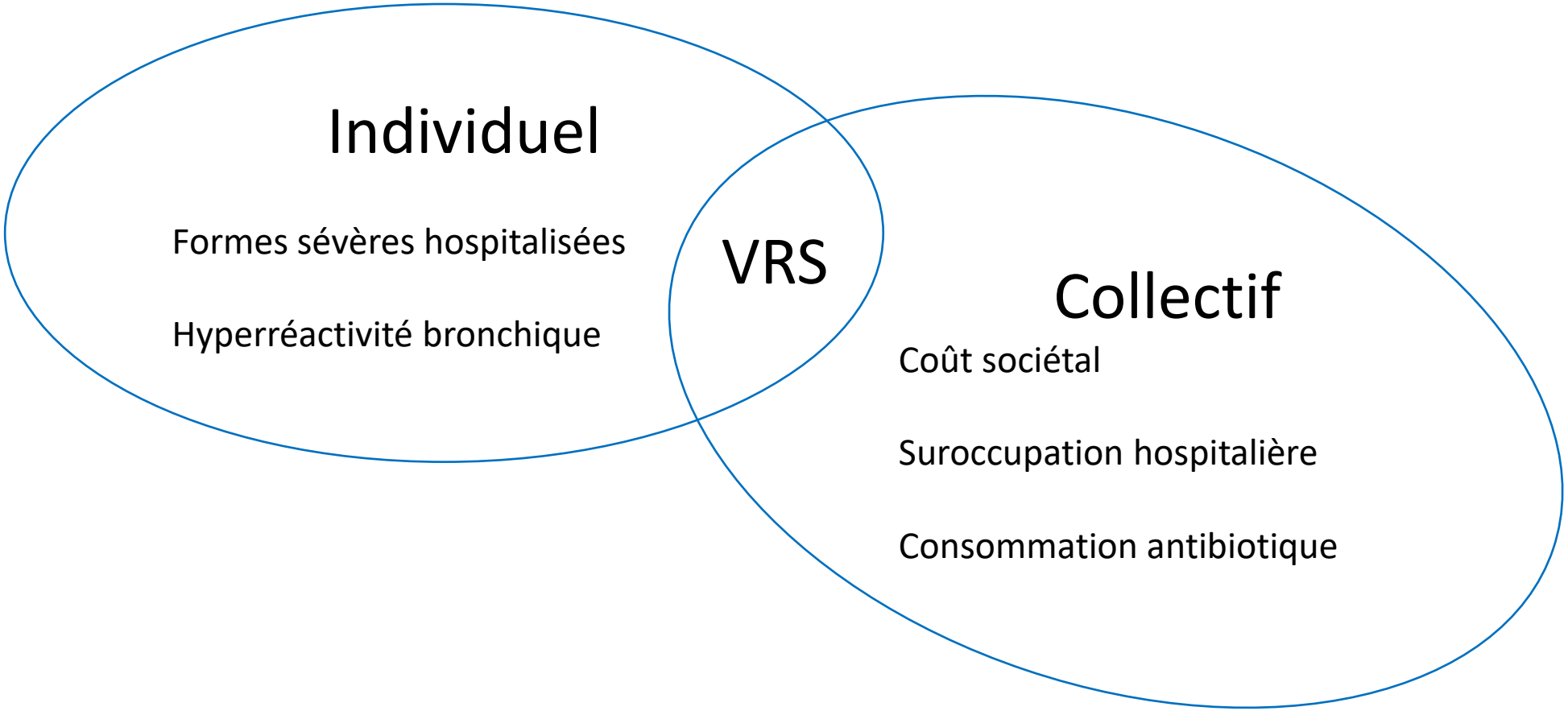
↓

-5 à 10% hospitalisés

↓

-5% soins intensifs

Zar HJ et al *Lancet* 2024 (9 September) doi.org/10.1016/S2213-2600(24)00290-X; M Raes et al EJP 2023

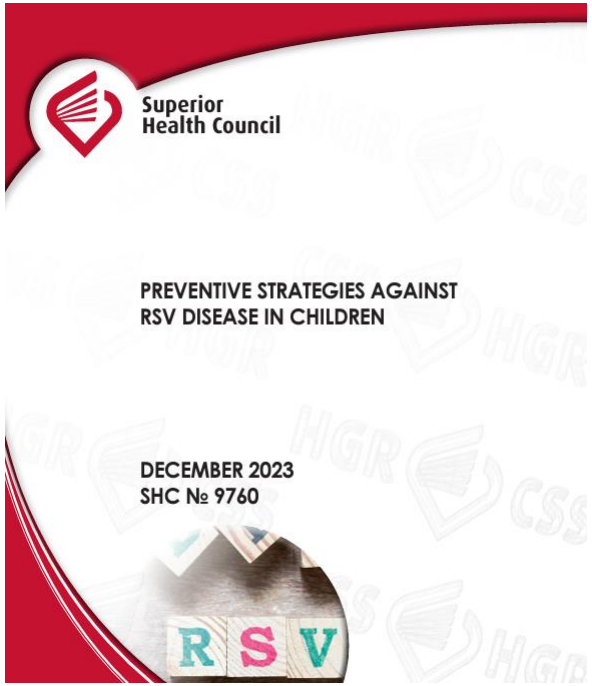

Individuel
Formes sévères hospitalisées
Hyperréactivité bronchique
VRS
Collectif
Coût sociétal
Suroccupation hospitalière
Consommation antibiotique

Prevention of RSV

2 strategies based on Superior Health Council advice

Maternal immunisation during pregnancy

Long acting monoclonal antibody



Prevention of RSV: 2025-2026

2 reimbursed strategies based on SHC advice

Maternal immunisation during pregnancy

-for women expected to deliver between September and March

-28 to 36 weeks of gestation

-at least 15 days before delivery

-no coadministration with pertussis vaccine

Long acting monoclonal antibody:

-for all infant/newborn born from unvaccinated mothers

-at birth if born during the RSV season (start 1rst October)

-or catch up for :

-those born since 18 February 2025

-premature infant less than 13 months of age at the start of the season and discharged from hospital after 18 February 2025

-second season for children at risk of severe infection

-coadministration possible with routine vaccine

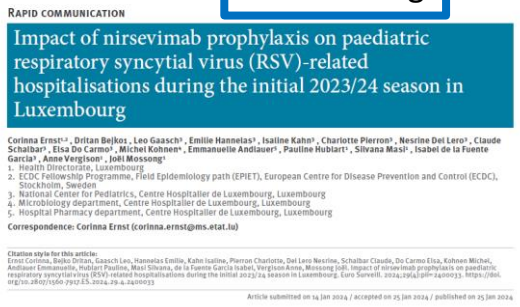
Individuel

Formes sévères hospitalisées

Hyperréactivité bronchique

Nirsevimab: efficacy in real life

Luxembourg



RAPID COMMUNICATION

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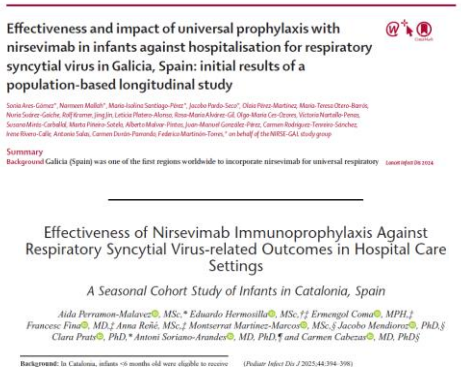
Citation style for this article: Ernst Corinna, Beiko Dritan, Gaasch Leo, Hannelas Emilie, Kahn Isaline, Pierron Charlotte, Del Lero Nesrine, Schalbar Claude, Do Carmo Elsa, Kohnen Michel, Andlauer Emmanuelle, Hublart Pauline, Masi Silvana, de la Fuente Garcia Isabel, Vergison Anne, Mossong Joël. Impact of nirsevimab prophylaxis on paediatric respiratory syncytial virus (RSV)-related hospitalisations during the initial 2023/24 season in Luxembourg. Euro Surveill. 2024;29(4):pii=2400033. https://doi.org/10.2807/1560-7917.ES.2024.29.4.2400033

Article submitted on 14 Jan 2024 / accepted on 25 Jan 2024 / published on 25 Jan 2024

Spain



Effectiveness and impact of universal prophylaxis with nirsevimab in infants against hospitalisation for respiratory syncytial virus in Galicia, Spain: initial results of a population-based longitudinal study

Sonia Ares-Gómez[1], Nermeen Mallah[1], María-Isolina Santiago-Pérez[1], Jacobo Pardo-Seco[1], Olalla Pérez-Martínez[1], María-Teresa Otero-Barrós[1], Nuria Suárez-Gaiche[1], Rolf Kramer[1], Jing Jin[1], Leticia Platero-Alonso[1], Rosa-María Alvárez-Gil[1], Olga-María Cid-Otero[1], Victoria Nartallo-Penas[1], Susana Minta-Carballal[1], Marta Pineiro-Sotelo[1], Alberto Malvar-Pintos[1], Juan-Manuel González-Pérez[1], Carmen Rodríguez-Tenreiro-Sánchez[1], Irene Rivero-Calle[1], Antonio Salas[1], Carmen Durán-Parrondo[1], Federico Martinón-Torres[1], on behalf of the NIRSE-GAL study group

Summary

Background Galicia (Spain) was one of the first regions worldwide to incorporate nirsevimab for universal respiratory

Effectiveness of Nirsevimab Immunoprophylaxis Against Respiratory Syncytial Virus-related Outcomes in Hospital Care Settings

A Seasonal Cohort Study of Infants in Catalonia, Spain

Aida Perramon-Malavez, MSc,* Eduardo Hermosilla, MSc,†‡ Ermengol Coma, MPH,‡ Francesc Fina, MD,‡ Anna Reñé, MSc,‡ Montserrat Martínez-Marcos, MSc,§ Jacobo Mendioroz, PhD,§ Clara Prats, PhD,* Antoni Soriano-Arandes, MD, PhD,¶ and Carmen Cabezas, MD, PhD§

Background: In Catalonia, infants <6 months old were eligible to receive

(Pediatr Infect Dis J 2025;44:394–398)

France

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Nirsevimab for Prevention of Hospitalizations Due to RSV in Infants

S.B. Drysdale, K. Cathie, F. Flamein, M. Knuf, A.M. Collins, H.C. Hill, F. Kaiser, R. Cohen, D. Pinquier, C.T. Felter, N.C. Vassilouthis, J. Jin, M. Bangert, K. Mari, R. Nteene, S. Wague, M. Roberts, P. Tissières, S. Royal, and S.N. Faust, for the HARMONIE Study Group*

vaccines

MDPI

Article

Effectiveness of Nirsevimab Immunoprophylaxis Administered at Birth to Prevent Infant Hospitalisation for Respiratory Syncytial Virus Infection: A Population-Based Cohort Study

Guillermo Ezpeleta[1], Ana Navascués[2,3], Natividad Viguria[3,4], Mercedes Herranz-Aguirre[3,4], Sergio Enrique Juan Belloc[3], Juan Gimeno Ballester[3], Juan Carlos Murzábal[3], Manuel García-Cenoz[1,3,5], Camino Trobajo-Sanmartín[1,3,5], Aitziber Echeverría[1,3,5], Iván Martínez-Baz[1,3,5], Noelia Vera-Punzano[1,3], Itziar Casado[1,3,5], Héctor López-Mendoza[1], Carmen Ezpeleta[2,3] and Jesús Castilla[1,3,5,*]

SHORT COMMUNICATION OPEN ACCESS

Nirsevimab Effectiveness Against Cases of Respiratory Syncytial Virus Bronchiolitis Hospitalised in Paediatric Intensive Care Units in France, September 2023–January 2024

Juliette Paireau[1,2], Cécile Durand[3], Sylvain Raimbault[4], Joséphine Cazaubon[1], Guillaume Mortamet[5], Delphine Virlet[6], Christophe Milési[6], Elise Daudens-Vaysse[7], Dominique Plotz[8], Sabrina Tessier[8], Noémie Vanel[9], Jean-Loup Chappert[10], Karine Levieux[11], Ronan Ollivier[12], Jamel Daoudi[12], Bruno Coignard[1], Stéphane Leteurtre[13], Isabelle Parent-du-Châtelet[1], Sophie Vaux[1]

US

Please note: This report has been corrected.

Morbidity and Mortality Weekly Report

Early Estimate of Nirsevimab Effectiveness for Prevention of Respiratory Syncytial Virus–Associated Hospitalization Among Infants Entering Their First Respiratory Syncytial Virus Season — New Vaccine Surveillance Network, October 2023–February 2024

Heidi L. Moline, MD[1]; Ayesa Tannis, MPH[1]; Ariana P. Toepfer, MPH[1]; John V. Williams, MD[2,3]; Julie A. Boom, MD[4,5]; Janet A. Englund, MD[6]; Natasha B. Halasa, MD[7]; Mary Allen Staat, MD[8,9]; Geoffrey A. Weinberg, MD[10]; Rangaraj Selvarangan, PhD[11]; Marian G. Michaels, MD[2,3]; Leila C. Sahni, PhD[4,5]; Eileen J. Klein, MD[6]; Laura S. Stewart, PhD[7]; Elizabeth P. Schlaudecker, MD[8,9]; Peter G. Szilagyi, MD[10]; Jennifer E. Schuster, MD[12]; Leah Goldstein, MPH[1]; Samar Musa, MPH[2,3]; Pedro A. Piedra, MD[4,5]; Danielle M. Zerr, MD[6]; Kristina A. Betters, MD[7]; Chelsea Rohlfs, MBA[9]; Christina Albertin, MPH[10]; Dithi Banerjee, PhD[12]; Erin R. McKeever, MPH[1]; Casey Kalman, MPH[1]; Benjamin R. Clopper, MPH[1]; New Vaccine Surveillance Network Product Effectiveness Collaborators; Meredith L. McMorrow, MD[1,*]; Fatimah S. Dawood, MD[1,*]

JAMA Network Open

Original Investigation | Pediatrics

Estimated Effectiveness of Nirsevimab Against Respiratory Syncytial Virus

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Effectiveness of nirsevimab against RSV-bronchiolitis in paediatric ambulatory care: a test-negative case–control study

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The NEW ENGLAND JOURNAL of MEDICINE

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Z. Assad, A.-S. Romain, C. Aupiais, M. Shum, C. Schrimpf, M. Lorrot, H. Corvol,

OPEN

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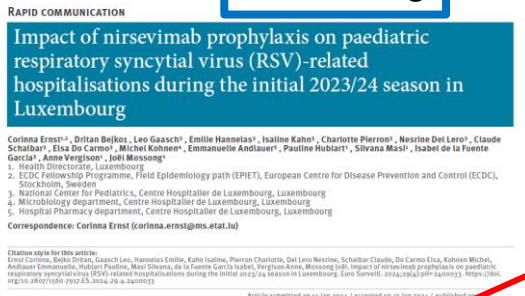
A REAL-WORLD STUDY

Eric Jeziorski, PhD, MD,*† Antoine Ouziel, MD,*†

Nirsevimab: efficacy in real life

Luxembourg



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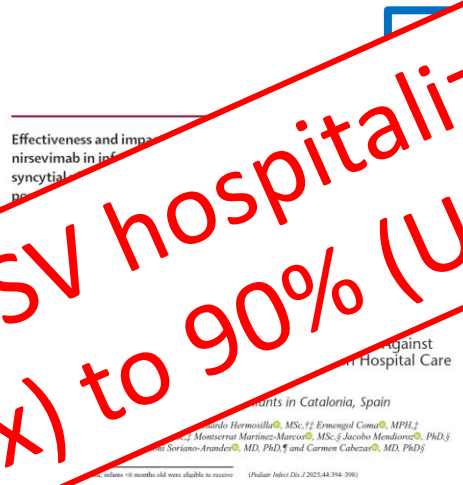

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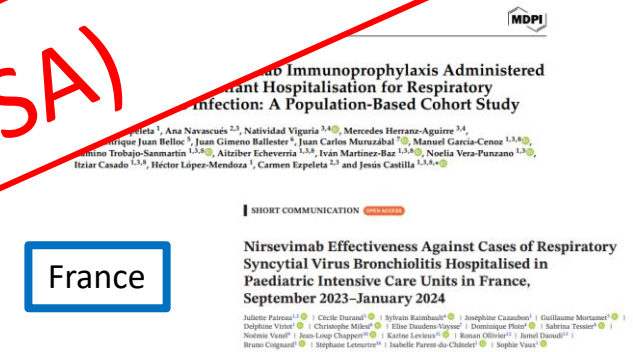

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JAMA Network Open

Original Investigation | Pediatrics

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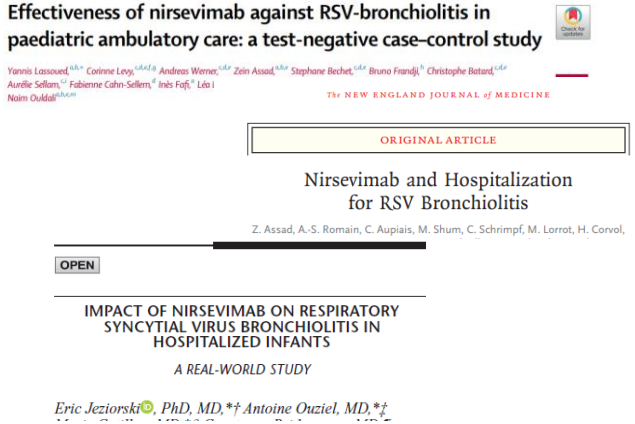

Effectiveness of nirsevimab against RSV-bronchiolitis in paediatric ambulatory care: a test-negative case–control study

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A REAL-WORLD STUDY

Eric Jeziorski, PhD, MD,*† Antoine Ouziel, MD,*†

Reduction of RSV hospitalization estimates from 69% (Lux) to 90% (USA)

Main benefits from Nirsevimab

- Short term:
  - -reduced **RSV hospitalized** cases compared to previous year: 69% (Lux) to 90% (USA-Spain)
  - -effectiveness on **ICU hospitalization** for RSV bronchiolitis: 80% (France) -85% (Spain)
  - -reduced severity
  - -effectiveness on RSV bronchiolitis in paediatric **ambulatory care** (< 12 m): 80% (France)-61,6% (US)
- Long term:
  - -asthma, subsequent hospitalizations?

RSVpreF vaccine : efficacy in real life

Argentina

UK

VACCINE REPORTS

Maternal Immunization With RSVpreF Vaccine: Effectiveness in Preventing Respiratory Syncytial Virus–associated Hospitalizations in Infants Under 6 Months in Argentina

Multicenter Case–control Study

Angela Gentile, MD, María del Valle Juárez, MD,* María Florencia Lucion, MD,* Gabriela Gregorio, MD,† Oscar López, MD,‡ Tatiana Fernández, MD,† Andrés Gioiosa, MD,† Silvina Lobertti, MD,§ Natalia Pejito, MD,* Leandro López, MD,‡ and Gabriela Ensinck, MD§*

Real-world effectiveness of RSVpreF vaccination during pregnancy against RSV-associated lower respiratory tract disease leading to hospitalisation in infants during the 2024 RSV season in Argentina (BERNI study): a multicentre, retrospective, test-negative, case–control study

*Gonzalo Pérez Marc, Carla Vizzotti, Deshayne B Fell, Lucila Di Nunzio, Santiago Olszevicki, Shauna Wolf Mankiewicz, Virginia Braem, Ramiro Rearte, Jessica E Atwell, Alejandra Bianchi, Nora Fuentes, Romina Zadoff, Gabriela Vecchio, María Gabriela Abalos, Rong Fan, Graciela del Carmen Morales, Bradford D Gessner, Luis Jodar, Romina Libster, Analia Rearte, on behalf of the BERNI study working group**

Bivalent prefusion F vaccination in pregnancy and respiratory syncytial virus hospitalisation in infants in the UK: results of a multicentre, test-negative, case-control study

Thomas C Williams, Robin Marlow*, Steve Cunningham, Simon B Drysdale, Helen E Groves, Samantha Hunt, Dalia Iskander, Xinxue Liu, Mark D Lyttle, Chengetai D Mpamhanga, Shaun O'Hagan, Thomas Waterfield, Damian Roland, on behalf of the PERUKI & BronchStart Collaboration†*

RSVpreF vaccine : efficacy in real life

Argentina

VACCINE REPORTS

Maternal Immunization With RSVpreF Vaccine: Effectiveness in Preventing Respiratory Syncytial Virus–associated Hospitalizations in Infants Under 6 Months in Argentina

Multicenter Case–control Study

Angela Gentile, MD, María del Valle Juárez, MD,* María Florencia Lucion, MD,* Gabriela Gregorio, MD,† Oscar López, MD,‡ Tatiana Fernández, MD,† Andrés Gioiosa, MD,† Silvina Lobertti, MD,§ Natalia Pejito, MD,* Leandro López, MD,‡ and Gabriela Ensinck, MD§*

UK

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VE against hospitalisation:

68,7% to 78,6% under 3 months

71,6% to 78,7% under 6 months

58% any time before delivery

72% ≥ 14 days before delivery

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sciensano

Epidémiologie des maladies infectieuses

Résumé exécutif:

- Estimation de l'efficacité de l'immunisation contre les hospitalisations à VRS à 85,63%
- Estimation que 35-45% des hospitalisations ont été évitées grâce à l'introduction du nirsevimab chez enfant de < 5 ans (n= 4000)

- Estimation de la couverture de l'immunisation estimée à 62-74% -
  une augmentation à 90% permettrait de réduire de 10-15% supplémentaires le nombre d'hospitalisations (1500 cas supplémentaires)

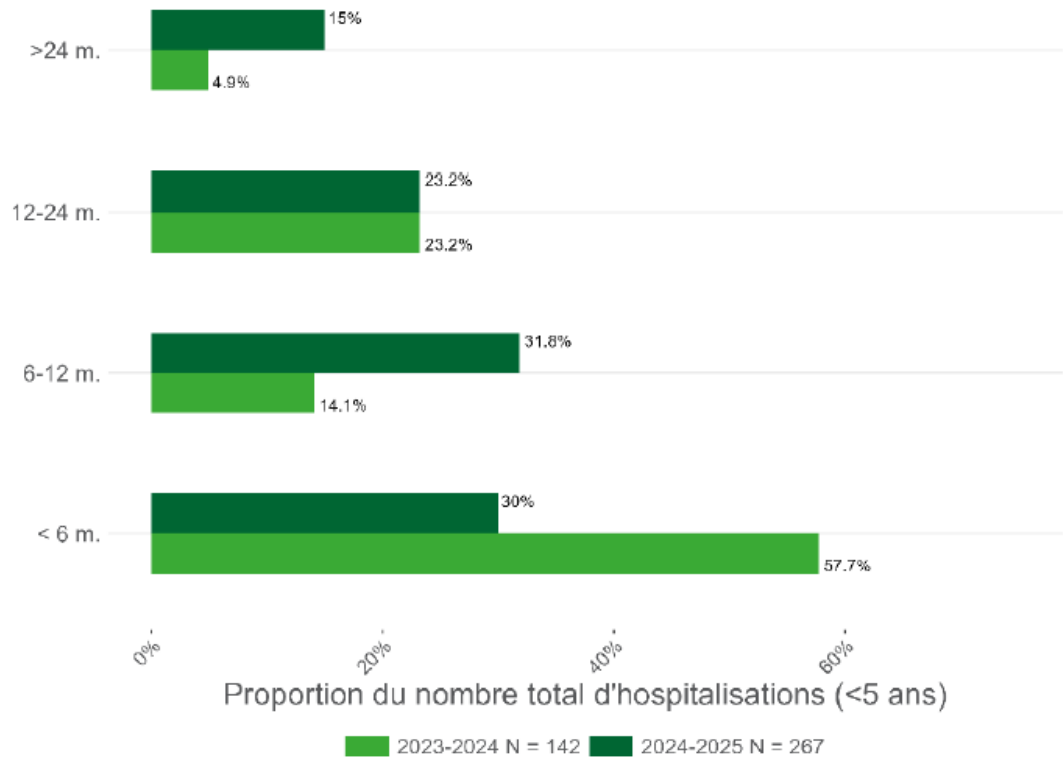

Figure 6 • Proportion des hospitalisations causées par le VRS en fonction de l'âge en 2023-2024 et en 2024-2025, parmi les enfants de moins de 5 ans (réseau des hôpitaux vigies).

Individuel

Formes sévères hospitalisées

Hyperréactivité bronchique

Collectif

Coût sociétal

Suroccupation hospitalière

Consommation antibiotique

Conclusions: prévention du VRS

- Au niveau individuel: EFFET +++ sur réduction des cas sévères (H, ICU) mais:
  - couverture catch-up insuffisante en Belgique
  - manque de données 1° ligne
  - manque données sur effet long terme (hyperréactivité bronchique, réhospitalisation)
  - effet sur co infections?

- Au niveau sociétal:
  - réduction attendue coût par épisode (absentéisme parents)
  - effet sur taux d'occupation (service < 25 lits)
  - un des moyens de réduction consommation antibiotique (manque de facteurs prédictifs surinfection)

- Futur:
  - autres produits
  - vaccin intranasal (> 6 mois)