

Journées thématiques SPILF/SFLS
**Prévention du risque infectieux
 en populations particulières :
 Migrants / Immunodéprimés**

NICE - 30 Septembre / 1^{er} Octobre 2022



Réponse vaccinale anti SARS-CoV-2 chez les patients en oncologie

Dr Jérôme BARRIERE

Oncologue médical

Cagnes-sur-Mer

JANVIER 2022

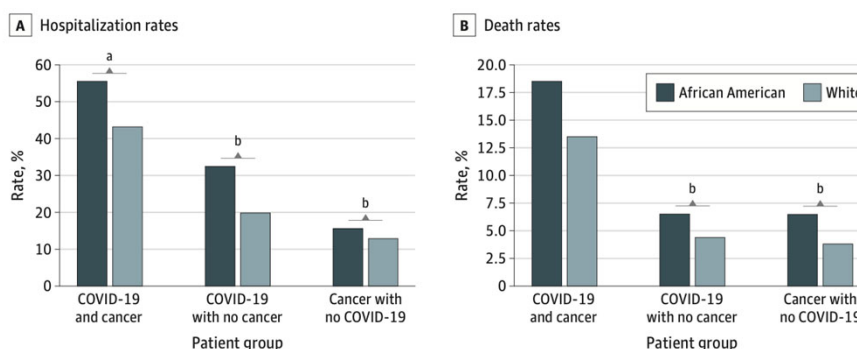


**COVID-19 et cancer: augmentation du risque
 d'hospitalisation et de décès**

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Figure 4. Hospitalization and Death Rates Among Adults



Wang et al. JAMA Oncology 2021

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Received: 21 April 2021 | Revised: 23 April 2021 | Accepted: 23 April 2021
DOI: 10.1002/ajh.26209

RESEARCH ARTICLE

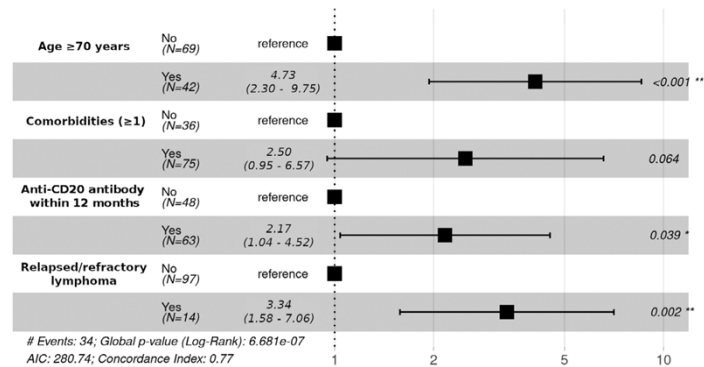


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Prolonged in-hospital stay and higher mortality after Covid-19 among patients with non-Hodgkin lymphoma treated with B-cell depleting immunotherapy

Rémy Duléry¹ | Sylvain Lamure² | Marc Delord³ | Roberta Di Blasi⁴

Hazard ratio - Overall survival



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Original Investigation

September 26, 2022

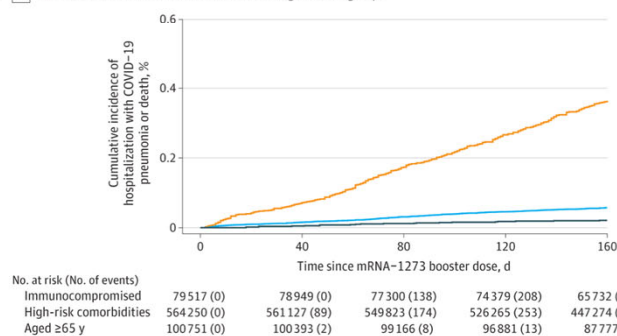
ONLINE FIRST FREE

Incidence of Severe COVID-19 Illness Following Vaccination and Booster With BNT162b2, mRNA-1273, and Ad26.COVS.2 Vaccines

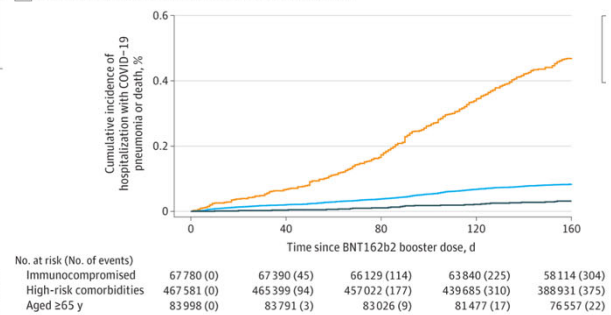
J. Daniel Kelly, MD, PhD^{1,2,3,4}; Samuel Leonard, MS¹; Katherine J. Hoggatt, PhD^{1,5}; et al

» Author Affiliations | Article Information

Jr B Vaccination and booster with mRNA-1273 in high-risk subgroups



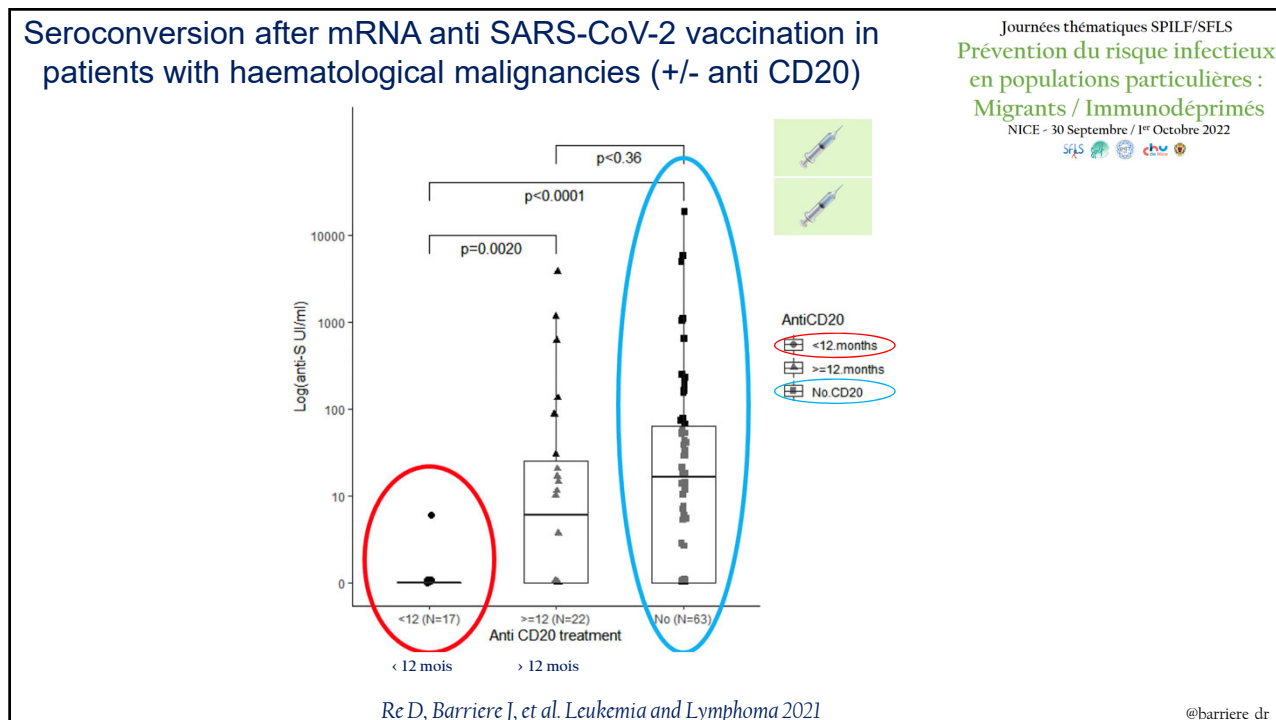
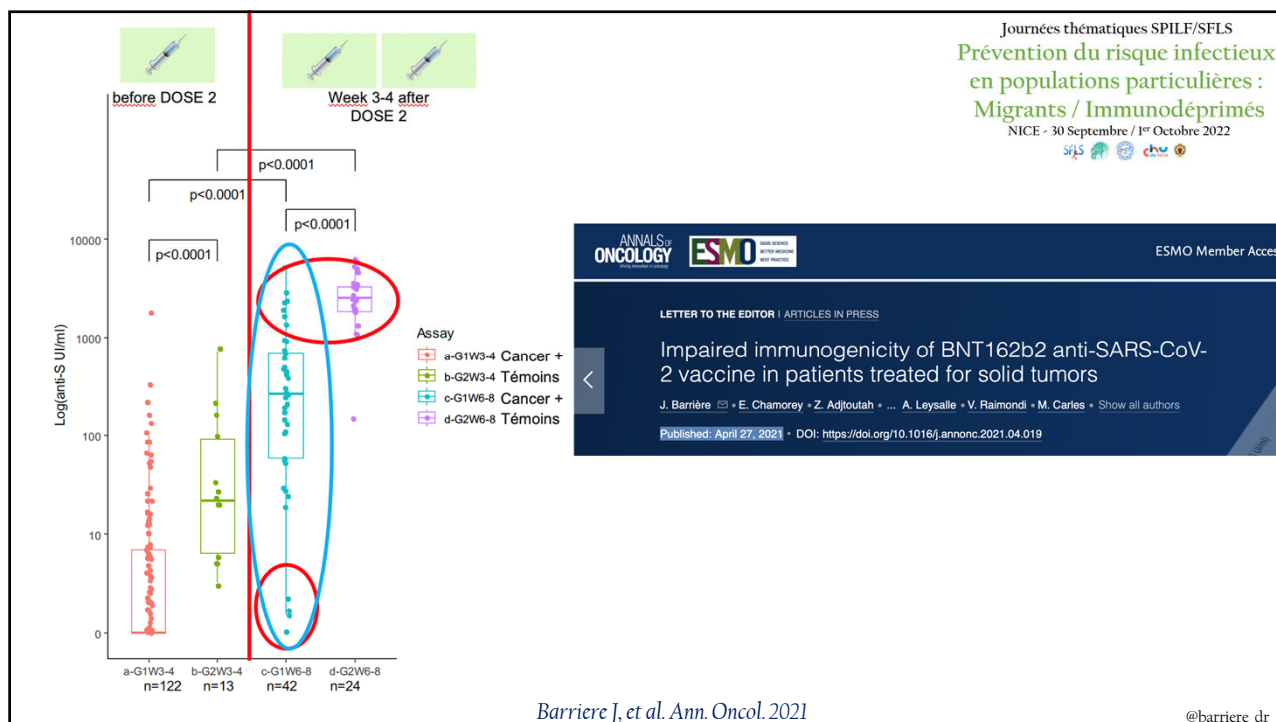
C Vaccination and booster with BNT162b2 in high-risk subgroups



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Risk group, median follow-up (IQR), d
Immunocompromised, 168 (168-168)
High-risk comorbidities, 168 (165-168)
Aged ≥65 y, 168 (168-168)

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American Society of Hematology
2021 L Street NW, Suite 900,
Washington, DC 20036
Phone: 202-776-0544 | Fax 202-776-0545
editorial@hematology.org

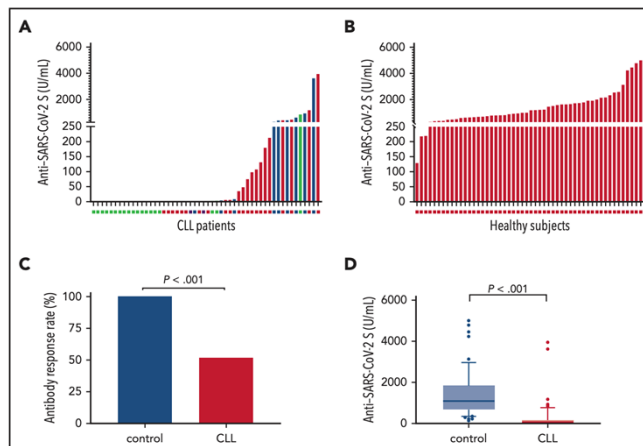
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Efficacy of the BNT162b2 mRNA COVID-19 Vaccine in Patients with Chronic Lymphocytic Leukemia

red bars indicate treatment naive,
green bar indicates on-therapy,



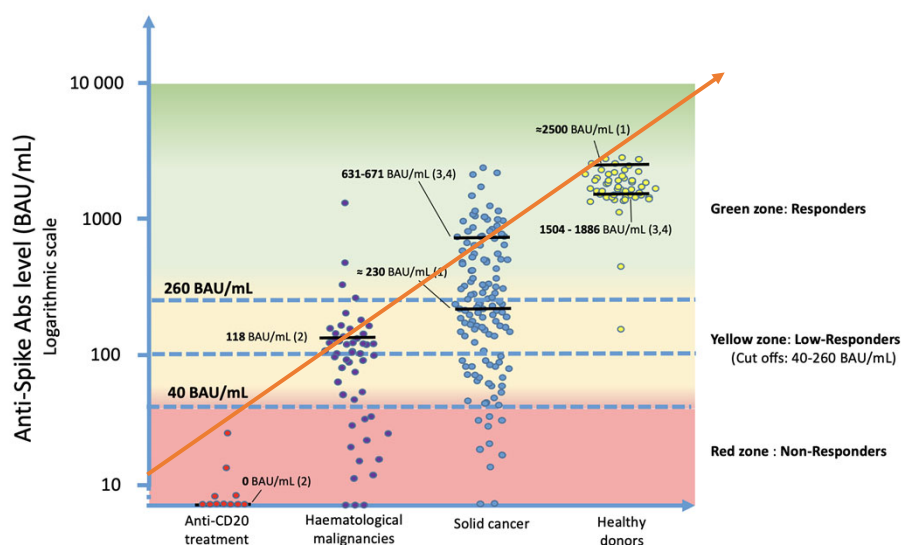
Yair Herishanu et al. Blood 2021

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Réponse sérologique après 2 doses en oncologie: schéma résumé

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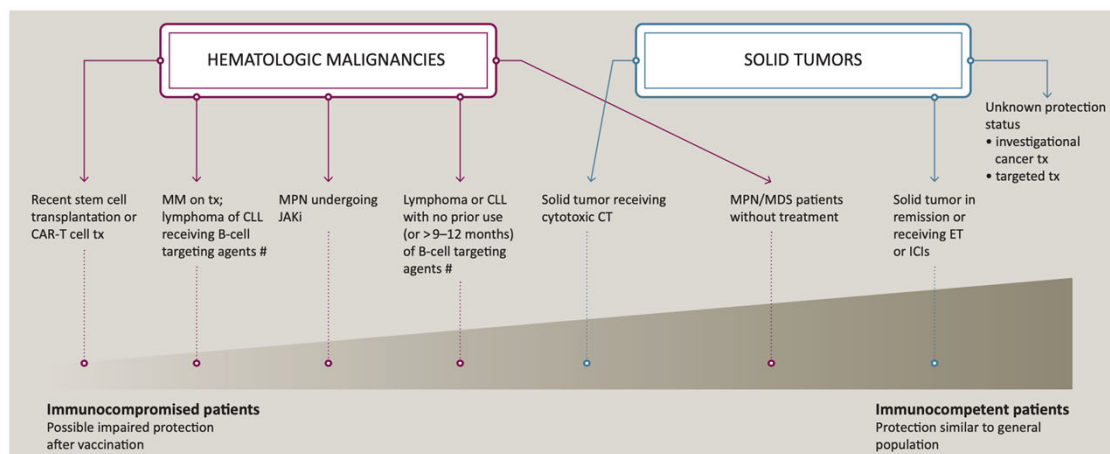


Barrière et al, EJC 2022

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Spectre estimé de l'efficacité du vaccin COVID-19 pour les patients atteints de cancer, selon les types de cancer et les thérapies.

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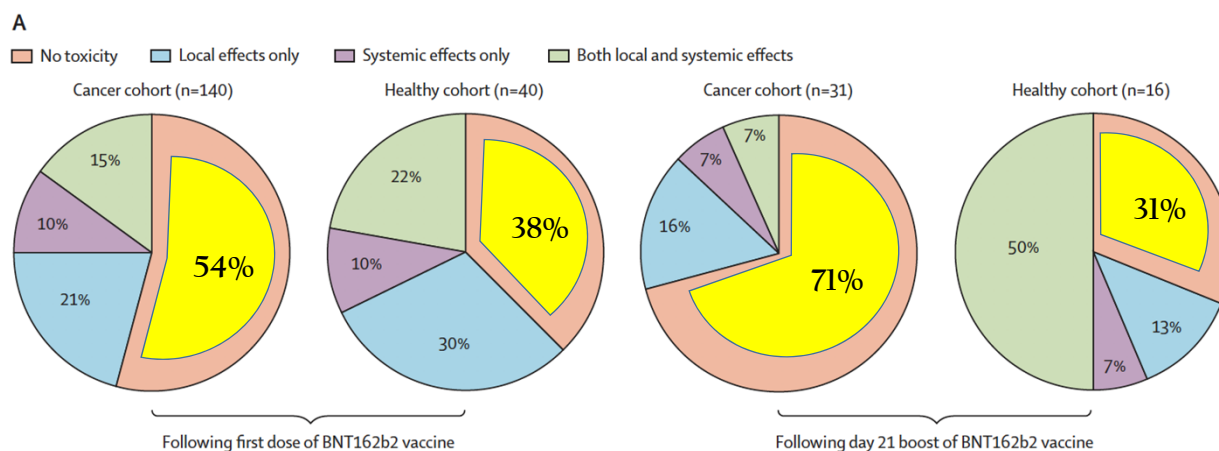


Corti et al. Ann Oncol. 2022

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QUELLE TOLÉRANCE DE LA VACCINATION ANTI-COVID EN ONCOLOGIE?

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Monin L et al. Lancet Oncol 2021

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3^{ÈME} DOSE VACCINALE EN ONCOLOGIE SOLIDE

Journal of Thoracic Oncology

IASLC INTERNATIONAL ASSOCIATION FOR THE STUDY OF LUNG CANCER

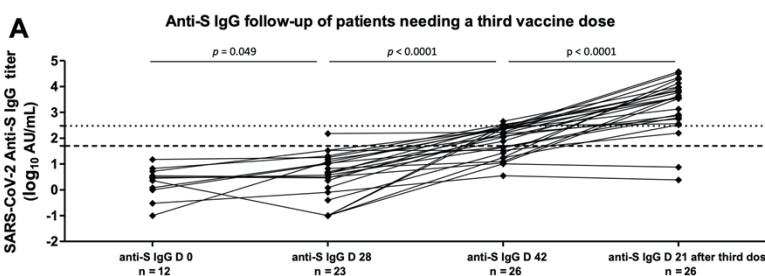
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ORIGINAL ARTICLE | ARTICLES IN PRESS

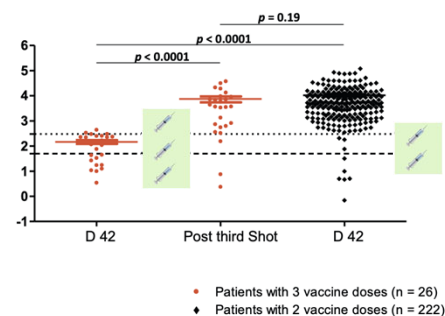
Efficacy of Severe Acute Respiratory Syndrome Coronavirus-2 Vaccine in Patients With Thoracic Cancer: A Prospective Study Supporting a Third Dose in Patients With Minimal Serologic Response After Two Vaccine Doses

Valérie Gounant, MD, MSc • Valentine Marie Ferré, PharmD, MSc • Ghassen Soussi, MD • ...
Luis Teixeira, MD, PhD • Diane Descamps, MD, PhD • Gérard Zalcman, MD, PhD

Published: November 16, 2021 • DOI: <https://doi.org/10.1016/j.jtho.2021.10.015>

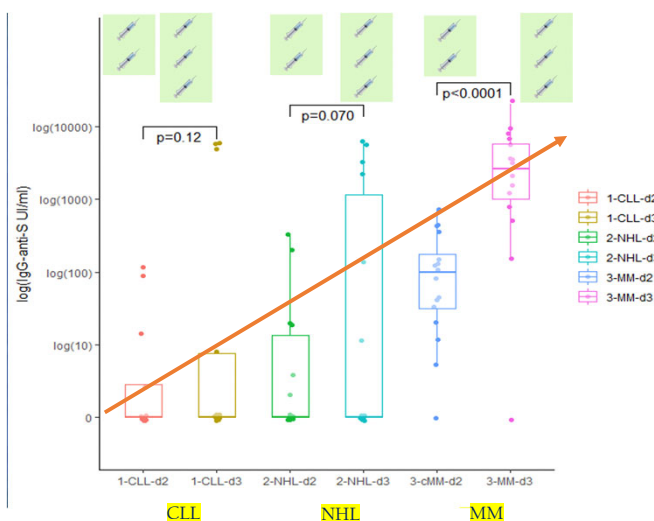


B Anti-S IgG in patients receiving 2 or 3 doses according to their anti-S IgG titer at D 42

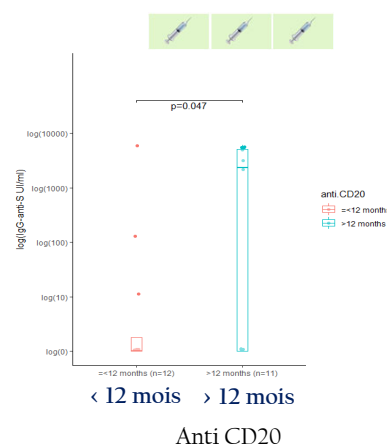


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3^{ÈME} DOSE VACCINALE EN HEMATO-ONCOLOGIE



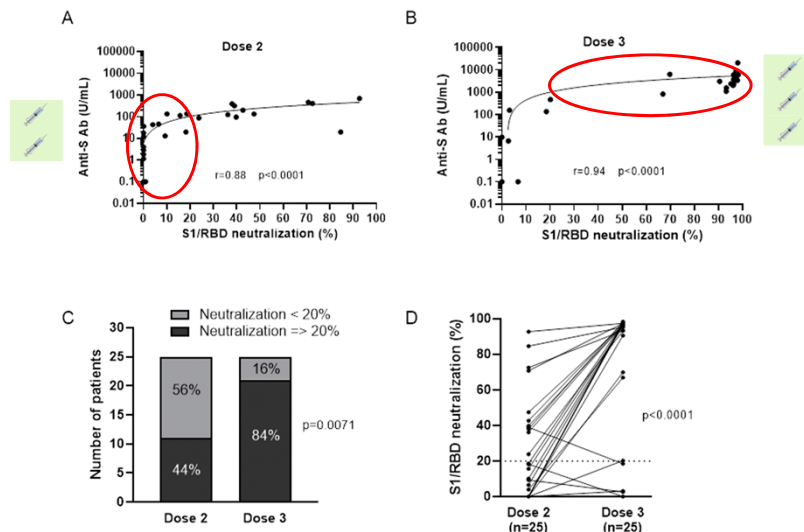
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Re D., Seitz-Polski B. et al. Nature Com 2022

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Evolution du taux d'anticorps neutralisants

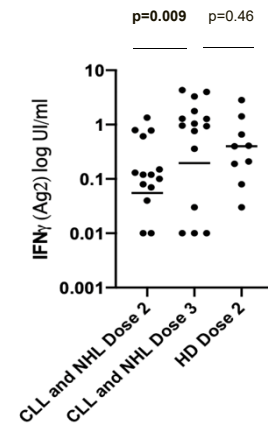


Re D., Seitz-Polski B. et al. Nature Com 2022

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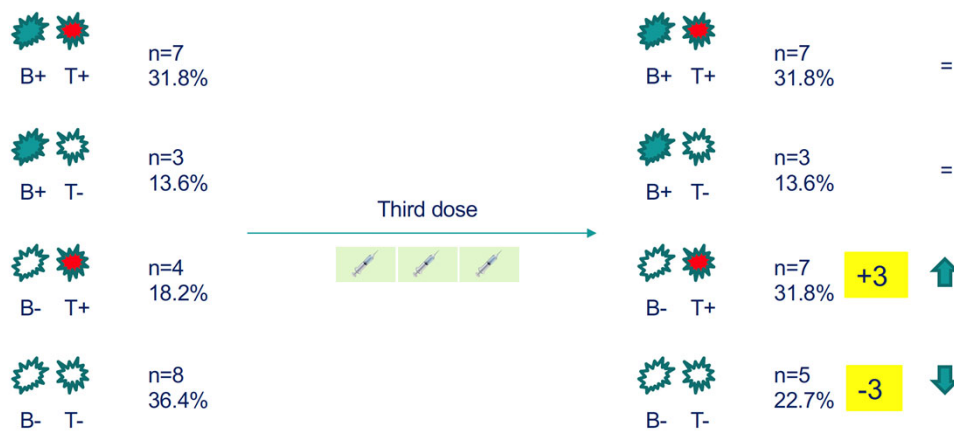
Réponse T



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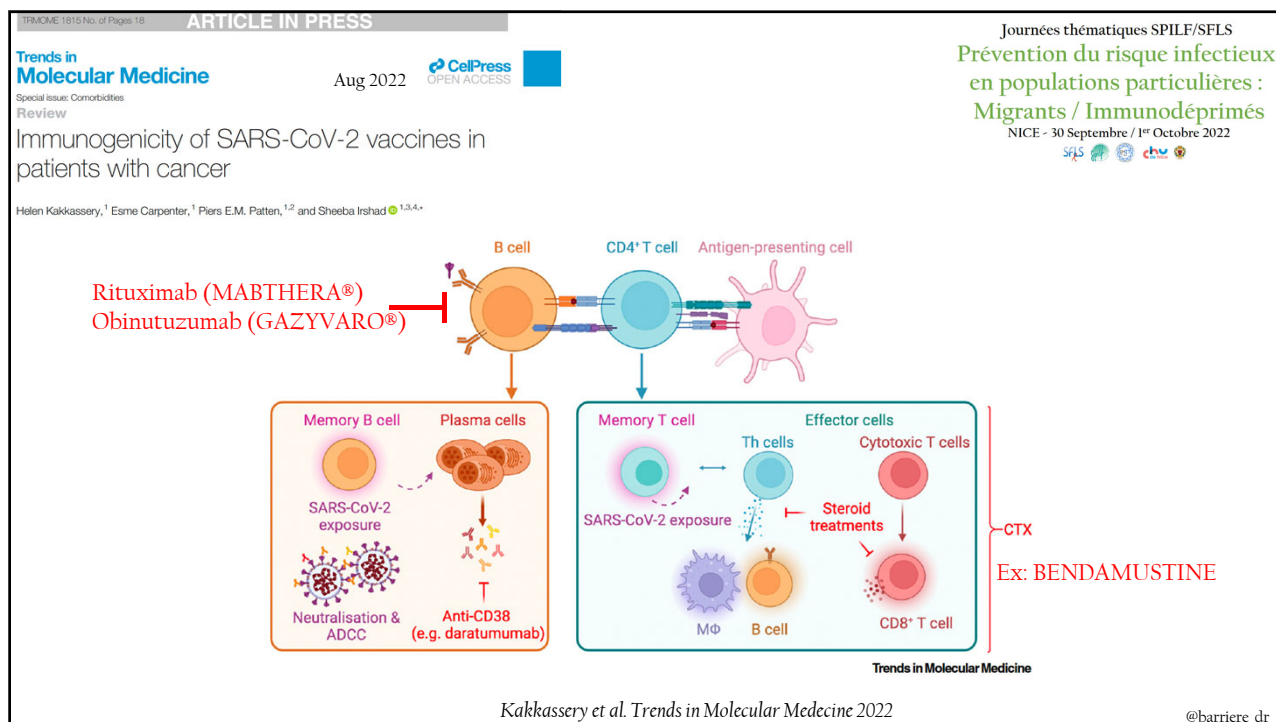
1 patient sur 5 reste « double négatif »

(réponse B et T = 0)
(LLC et LNH)



Re D., Seitz-Polski B. et al. Nature Com 2022

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European Journal of Cancer 165 (2022) 25–26

Available online at www.sciencedirect.com
ScienceDirect
journal homepage: www.ejccancer.com

Letter to the Editor

Omicron variant: A clear and present danger for patients with cancer

J. Barrière ^{a,*}, G. Zalzman ^b, L. Fignon ^c, N. Peiffer-Smadja ^d,
C. Audigier-Valette ^e, M. Carles ^f

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- Proposition 1 : recommander un suivi sérologique chez les patients immunodéprimés
- Proposition 2 : retenir le seuil de 1000 BAU/mL comme taux d'Ac anti-S pour une dose vaccinale additionnelle = **BOOST** (ex: dose 4).

IMMUNO-SEROLOGIE

Sérologie COVID-19 AC Totaux Quantitative
Cité : Ac anti-proteine S (Splice) - ECLIA - Cobas - Roche

Détection des Ac Anti-S : 5 582,0 BAU/mL < 0,8 42,4 Le 09.12.2021
Interprétation..... Positive

Confirmation de la détection d'anticorps anti-SARS-CoV-2-S.
Résultat en faveur de la persistance d'un taux significatif d'anticorps dirigés contre la protéine S.
Profil sérologique à confronter au contexte clinique et à la date de l'injection vaccinale.

dose 4
4/2/2022

dose 3
30/9/21

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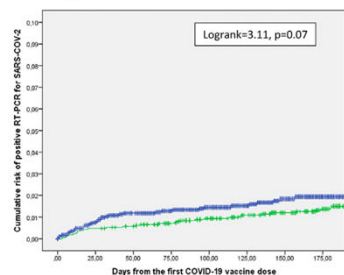
Original Research

Survival and risk of COVID-19 after SARS-COV-2 vaccination in a series of 2391 cancer patients

Pierre Heudel^a, Bertrand Favier^b, Marie-Laure Solodky^c

01/21=> 09/21

A: Cancer patients and Health Care Workers



B: COVID-19 in cancer patients after the first dose of SARS-COV-2 vaccine per number of vaccine doses

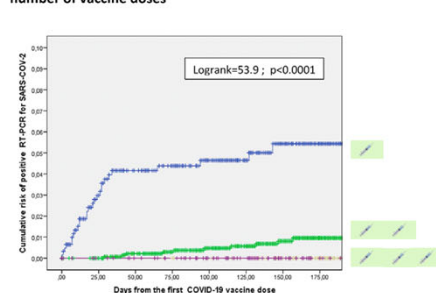


Table 2

Multivariate analysis of risk factors of post vaccine COVID-19 or death after the first vaccine dose

	Beta	SE	HR	p-value
Risk factors for COVID-19				
Only one vaccine dose	2.235	.360	9.34	.000
Anti-CD20 treatment	1.422	.607	4.143	.019
Age ≥ 60	-.706	.325	0.494	.030
Risk factors for death				
Metastatic disease	1.547	.254	4.696	.000
COVID-19 before 1st vaccine dose	.782	.346	2.187	.024
Hematological malignancy	.648	.271	1.912	.017
Male gender	.451	.167	1.570	.007

Heudel et al. EJC 2022

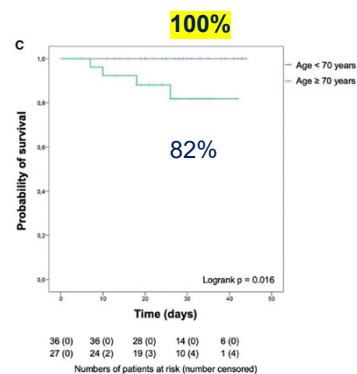
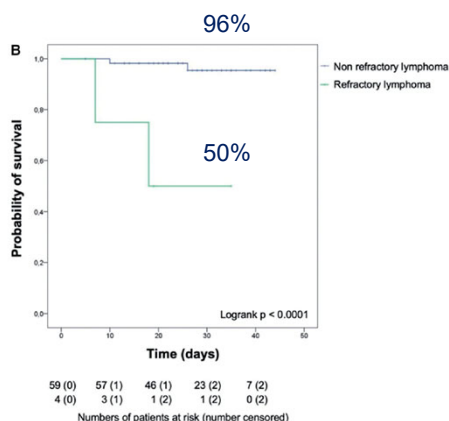
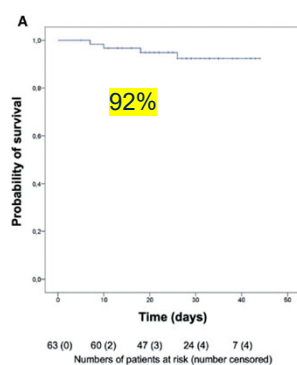
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LETTER TO THE EDITOR

Characteristics of SARS-CoV-2 infection in lymphoma/chronic lymphocytic leukemia patients during the Omicron outbreak

Milena Kohn^{a*}, Tamim Alsuliman^{b*}, Sylvain Lamure^{c*}, Morgane Cheminant^d, Jérémy Delage^e, Corinne Merle De Boever^f, Jean Jacques Tudesq^g, Zora Marjanovic^h, Zoé Van de Wyngaertⁱ, Florent Malard^j, Eolia Brissot^k, Sophie Rigaudeau^l, Stéphanie Marque-Juillet^m, Audrey Therbyⁿ, Guillaume Carton^o, Philippe Rousselot^p, Olivier Hermine^q, Rémy Duléry^r and Caroline Besson^{s,†}^aService d'Hématologie, Centre Hospitalier de Versailles, Le Chesnay, France; ^bSorbonne Université, INSERM UMR938, Service d'Hématologie Clinique et de Thérapie Cellulaire, Hôpital Saint Antoine, AP-HP, Paris, France; ^cDepartment of Clinical Hematology, Montpellier University Hospital, IGMM UMR5535 CNRS, University of Montpellier, Montpellier, France; ^dService d'Hématologie, Hôpital Necker, Paris, France; ^eService d'Hématologie, Clinique du Parc, France; ^fDépartement des maladies infectieuses et tropicales, Montpellier University Hospital, Montpellier, France; ^gLaboratoire de virologie, Centre Hospitalier de Versailles, Le Chesnay, France; ^hService de médecine interne, Centre Hospitalier de Versailles, Le Chesnay, France; ⁱUVSQ, Inserm, Equipe "Exposome et Hérité", CESP, Université Paris-Saclay, Villejuif, France

ARTICLE HISTORY Received 22 April 2022; revised 25 May 2022; accepted 29 May 2022



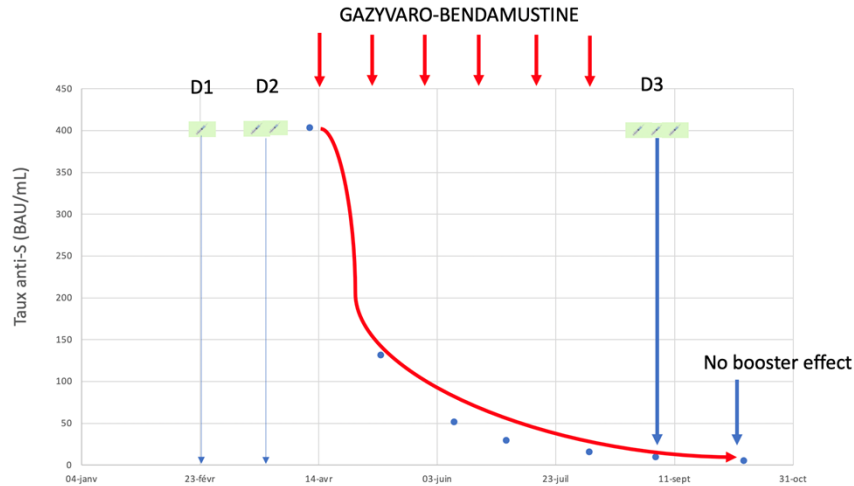
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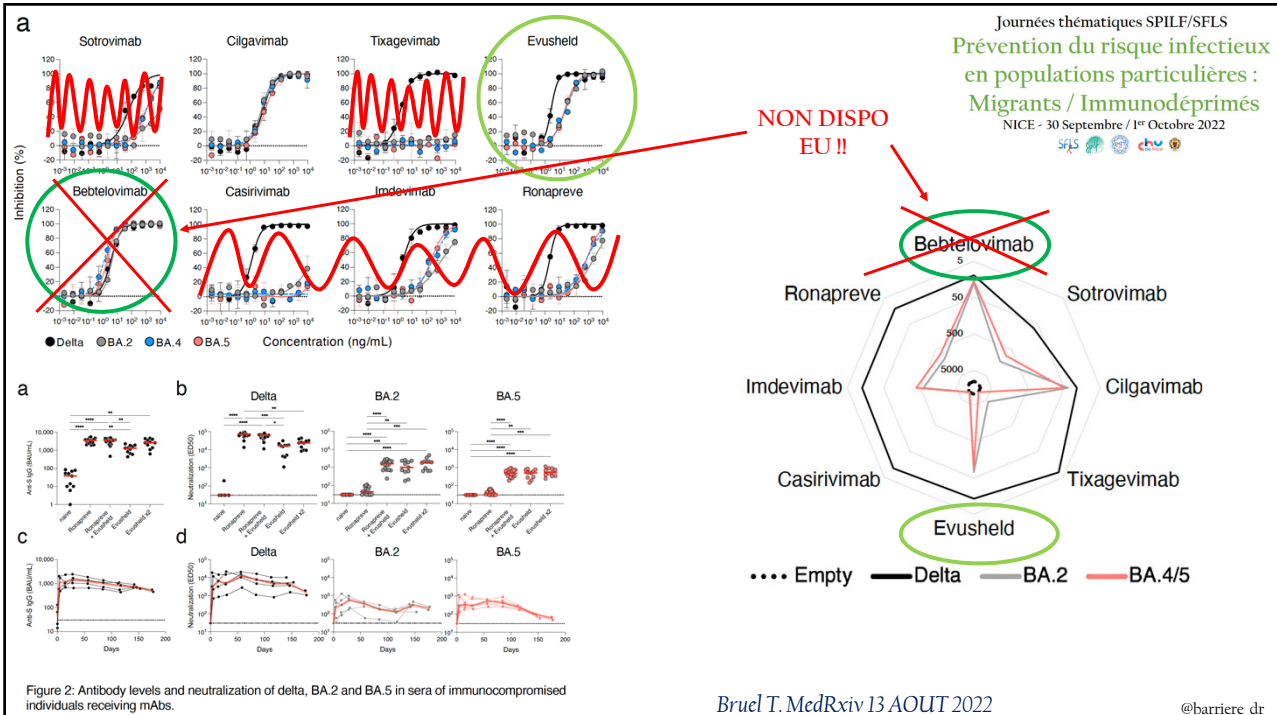
30-day OS

Homme de 77 ans, lymphome folliculaire évolutif en 2021

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Bruel T. MedRxiv 13 AOUT 2022

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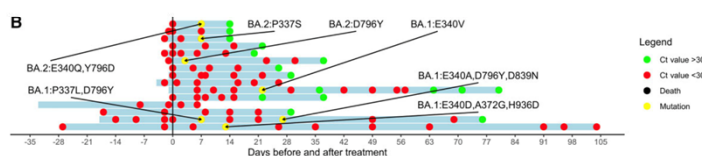
2022

Sotrovimab Resistance and Viral Persistence After Treatment of Immunocompromised Patients Infected With the Severe Acute Respiratory Syndrome Coronavirus 2 Omicron Variant

Sammy Huygens,^{1,a} Bas Oude Munnink,^{2,a} Arvind Gharbharan,¹ Marion Koopmans,^{2,a} and Bart Rijnders^{1,a}

¹Department of Internal Medicine, Section of Infectious Diseases and Department of Medical Microbiology and Infectious Diseases, Erasmus Medical Center, University Medical Center, Rotterdam, The Netherlands; and ²Department of Viroscience, Erasmus Medical Center, University Medical Center, Rotterdam, The Netherlands

Viral evolution was evaluated in 47 immunocompromised patients treated with sotrovimab. Sequencing of SARS-CoV-2 following therapy was successful in 16. Mutations associated with sotrovimab resistance were documented in 6; viral replication continued after 30 days in 5. Combination antibody therapy may be required to avoid acquired resistance in immunocompromised patients.



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RESEARCH NOTE | ARTICLES IN PRESS

Pre-exposure prophylaxis with tixagevimab and cilgavimab (Evusheld) for COVID-19 among 1112 severely immunocompromised patients

Yann Nguyen • Adrien Flahault • Nathalie Chavarot • ... Laurence Weiss • Luc Mouthon • AP-HP-Centre Monoclonal Antibodies Working Group • Show all authors

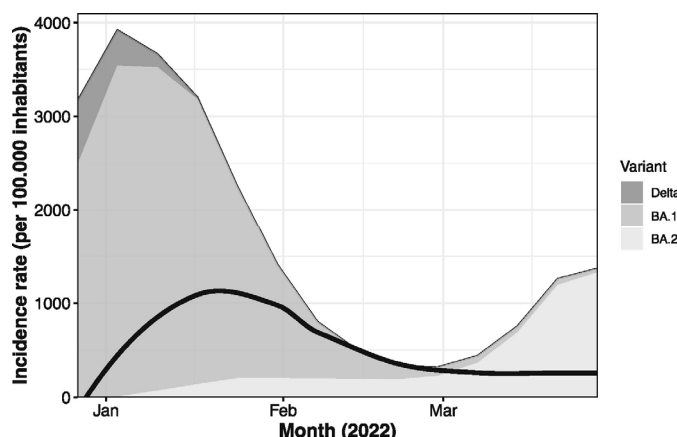
Published: July 31, 2022 • DOI: <https://doi.org/10.1016/j.cmi.2022.07.015>

Table 1
Characteristics of the 49 patients with confirmed COVID-19 infection at least 5 days after tixagevimab/cilgavimab pre-exposure prophylaxis

	Overall (n = 49)	Mild COVID-19 (n = 43)	Moderate-to-severe COVID-19 (n = 6)
Age, y	58.9 (20.7)	55.7 (20.2)	78.0 (12.9)
Underlying cause of immunosuppression			
Heart transplant	4 (8.2)	4 (9.3)	0 (0.0)
Lung transplant	3 (6.1)	3 (7.0)	0 (0.0)
Kidney transplant	17 (34.7)	13 (30.2)	4 (66.7)
Hematologic malignancies	12 (24.5)	11 (25.6)	1 (16.7)
Treatment with rituximab	10 (20.4)	9 (20.9)	1 (16.7)
Treatment with azathioprine	1 (2.0)	1 (2.3)	0 (0.0)
Primary immune deficiency	2 (4.1)	2 (4.7)	0 (0.0)
Days between treatment and infection	26 (17)	27 (18)	26 (11)
Previous treatment with REGEN-COV2	27 (55.2)	23 (54.8)	4 (66.7)
Clinical symptoms			
None	3 (6.1)	3 (7.0)	0 (0.0)
ENT involvement	28 (57.1)	26 (60.5)	2 (33.3)
Diarrhea, vomiting	9 (18.4)	5 (11.6)	4 (66.7)
Cough	23 (46.9)	18 (41.9)	5 (83.3)
Dyspnea	7 (14.3)	7 (16.3)	0 (0.0)
Fever	17 (34.7)	14 (32.6)	3 (50.0)
Muscle pain	9 (18.4)	9 (20.9)	0 (0.0)
Early therapy	24 (49.0)	23 (53.5)	1 (16.7)
Sotrovimab	11 (22.4)	10 (23.3)	1 (16.7)
Nirmatrelvir/ritonavir	4 (8.2)	4 (9.3)	0 (0.0)
Remdesivir	4 (8.2)	4 (9.3)	0 (0.0)
Evusheld	5 (10.2)	5 (11.6)	0 (0.0)
Other treatment	4 (8.2)	0 (0.0)	4 (66.7)
Dexamethasone	3 (6.1)	0 (0.0)	3 (50.0)
Tocilizumab	1 (2.0)	0 (0.0)	1 (16.7)
Convalescent plasma	10 (20.4)	4 (9.3)	6 (100.0)
Hospitalization	6 (12.2)	0 (0.0)	6 (100.0)
Oxygen therapy	2 (4.1)	0 (0.0)	2 (33.3)
Noninvasive ventilation	2 (4.1)	0 (0.0)	2 (33.3)
Death	2 (4.1)	0 (0.0)	2 (33.3)

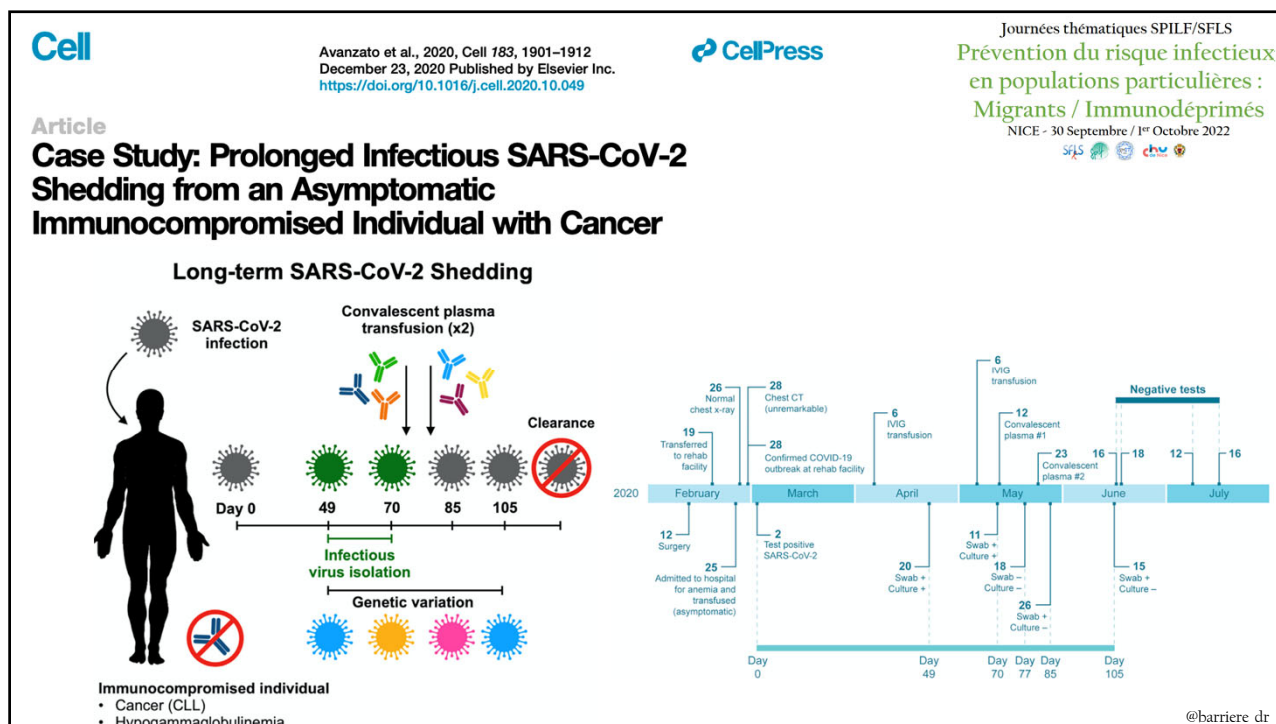
Data are presented as mean (SD) or count (percent).
ENT, ear nose throat; N, number.

N = 49 : 43 COVID-19 de forme légères
Parmi les 6 formes modérées/sévères: 2 décès

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Taux d'incidence comparé de la COVID-19 dans la population générale et la population traitée par EVUSHELD (Courbe noire)

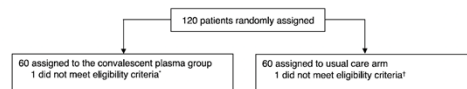
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medRxiv preprint doi: <https://doi.org/10.1101/2022.08.09.22278329>; this version posted August 10, 2022. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted medRxiv a license to display the preprint in perpetuity. All rights reserved. No reuse allowed without permission.

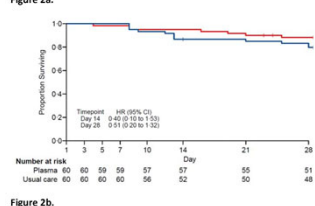
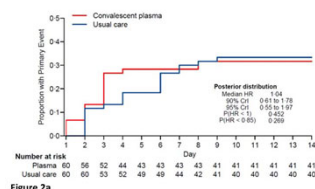
Efficacy and safety of convalescent plasma to treat hospitalised COVID-19 patients with or without underlying immunodeficiency: a randomized clinical trial

Karine Lacombe,¹ Thomas Hueso,² Raphael Porcher,³ Arsène Mekinian,⁴ Thibault Chiarabini,⁵ Sophie



between April 16, 2020, and April 21, 2021

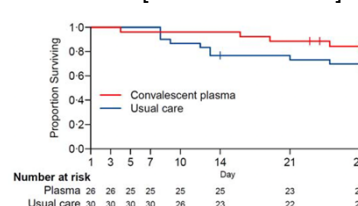
NS



At d28, SUBGROUP = immunosuppressed patients who received CCP compared to those with UC:

- **PLASMA = 4/22 patients had died**
- **USUAL CARE = 11/27**

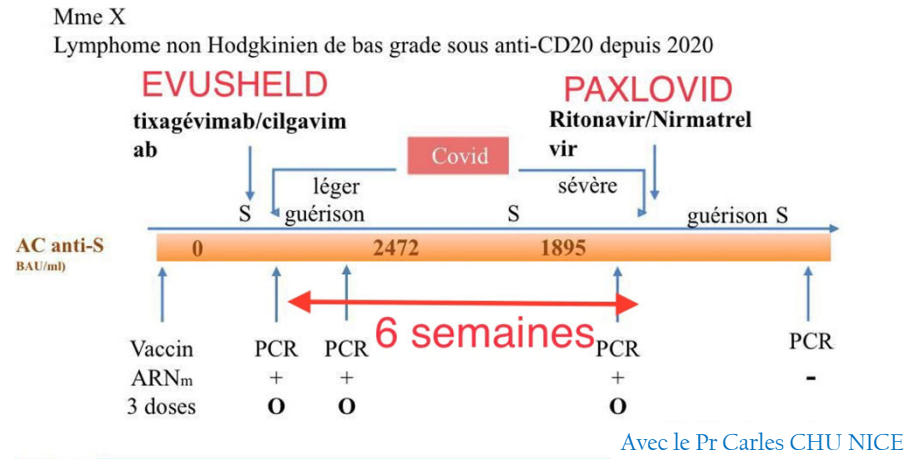
HR 0.36 [95% CI 0.14-0.97]



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Cas Cliniques (1/2)

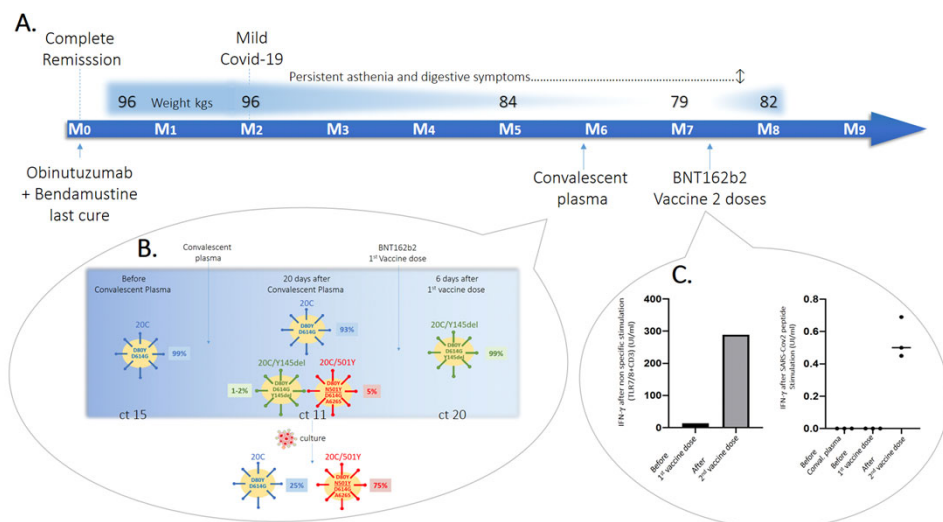
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Cas Cliniques (2/2)

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Carles M., Barriere J et al. unpublished data

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Journées thématiques SPILF/SFLS

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Conclusions:

1. Efficacité vaccinale anti SARS-CoV-2 démontrée rapidement en oncologie malgré exclusion initiale des essais cliniques des patients
2. Gradient d'efficacité selon le type de cancer et le type de traitement
3. Certains patients (onco-hémato) restent insensibles à la vaccination (réponse B et T)
4. Importance des anticorps monoclonaux et PAXLOVID. + mesures associées (FFP2)
5. Plasma de convalescents avec Omicron?
6. Efficacité des rappels des vaccins bi-valents?

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