JNI 17es Journées Nationales d'Infectiologie

du mardi 7 au jeudi 9 juin 2016
Lille Grand Palais

Lille
et l'interrégion Nord-Pas-de-Calais-Picardie

Best of en infectiologie
Vaccinologie

Odile Launay

Déclaration de liens d'intérêt avec les industries de santé en rapport avec le thème de la présentation (loi du 04/03/2002) :

Intervenant : Odile Launay

Titre : Best **of en infectiologie. Vaccinologie**

L'orateur ne souhaite pas répondre ☐

Consultant ou membre d'un conseil scientifique	☐ OUI	☑ NON
Conférencier ou auteur/rédacteur rémunéré d'articles ou documents	☑ OUI	☐ NON
Prise en charge de frais de voyage, d'hébergement ou d'inscription à des congrès ou autres manifestations	☑ OUI	☐ NON
Investigateur principal d'une recherche ou d'une étude clinique	☑ OUI	☐ NON

Déclaration d'intérêts de 2012 à 2015

- **Intérêts financiers : aucun**
- **Liens durables ou permanents : aucun**
- **Interventions ponctuelles : aucun**
- **Intérêts indirects :**

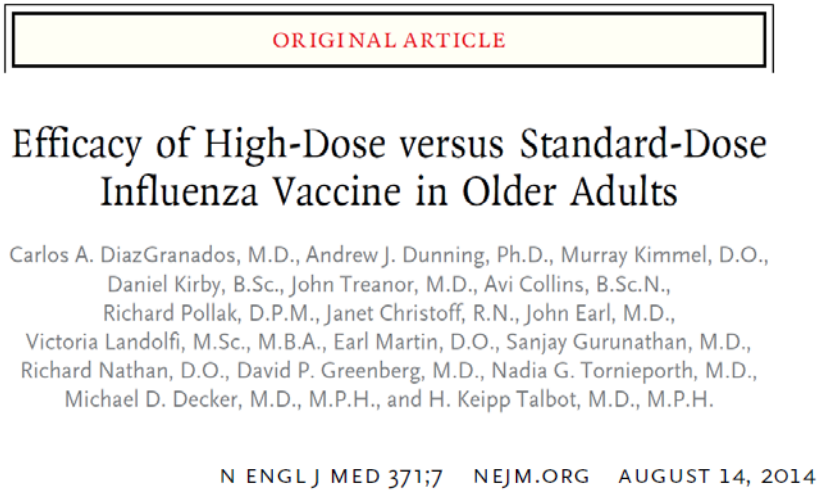
Vaccin grippe

Vaccin « high dose » plus efficace chez les plus de 65 ans

Vaccin High Dose:

- 60 microgramme d'HA par souches
  (*vs* 15 pour le vaccin standard)

- essai randomisé en dble aveugle
  - 126 centres aux USA et Canada
  - saisons 2011/2012 et 2012/2013
  - 31 898 personnes > 65 ans



ORIGINAL ARTICLE

Efficacy of High-Dose versus Standard-Dose Influenza Vaccine in Older Adults

Carlos A. DiazGranados, M.D., Andrew J. Dunning, Ph.D., Murray Kimmel, D.O., Daniel Kirby, B.Sc., John Treanor, M.D., Avi Collins, B.Sc.N., Richard Pollak, D.P.M., Janet Christoff, R.N., John Earl, M.D., Victoria Landolfi, M.Sc., M.B.A., Earl Martin, D.O., Sanjay Gurunathan, M.D., Richard Nathan, D.O., David P. Greenberg, M.D., Nadia G. Tornieporth, M.D., Michael D. Decker, M.D., M.P.H., and H. Keipp Talbot, M.D., M.P.H.

N ENGL J MED 371;7 NEJM.ORG AUGUST 14, 2014

Principaux résultats:

- pas de différence en terme d'EI
- **meilleure immunogénicité du vaccin « high dose »**

- **efficacité relative du vaccin HD par rapport au vaccin standard: 24,2% (95%IC: 9.7;36.5).**

Fluzone® High-Dose INFLUENZA VIRUS VACCINE

Vaccin pneumocoque conjugué
Résultats de l'essai CAPITA

Prévenar 13 versus placebo

- Essai randomisé 84 496 adultes > 65 ans, non immunodéprimés
- Efficacité démontrée sur les infections à pneumocoque de sérotype vaccinal:
  - pneumopathie communautaire: 45,6% (IC95%: 21,8-62,5%)
  - IIP: 75% (IC95%: 41,4-90,8%)
- Efficacité maintenue sur la durée (3,7 ans)

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Polysaccharide Conjugate Vaccine against Pneumococcal Pneumonia in Adults

M.J.M. Bonten, S.M. Huijts, M. Bolkenbaas, C. Webber, S. Patterson, S. Gault, C.H. van Werkhoven, A.M.M. van Deursen, E.A.M. Sanders, T.J.M. Verheij, M. Patton, A. McDonough, A. Moradoghli-Haftvani, H. Smith, T. Mellelieu, M.W. Pride, G. Crowther, B. Schmoele-Thoma, D.A. Scott, K.U. Jansen, R. Lobatto, B. Oosterman, N. Visser, E. Caspers, A. Smorenburg, E.A. Emini, W.C. Gruber, and D.E. Grobbee

N Engl J Med 2015;372:1114-25.
DOI: 10.1056/NEJMoa1408544

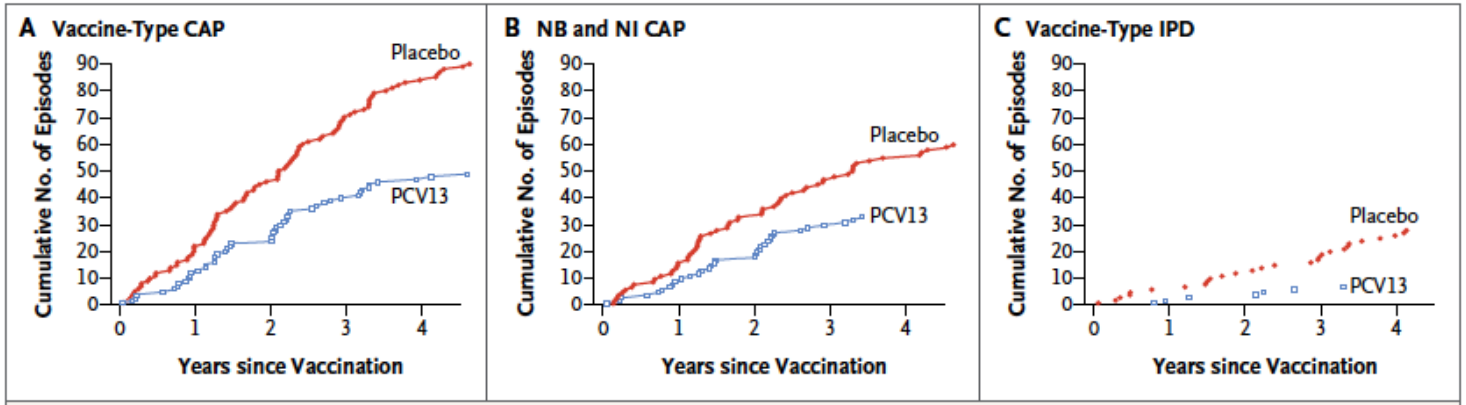


Figure 2. Post Hoc Analysis of the Cumulative Episodes of the Primary and Secondary Efficacy End Points in the Per-Protocol Population.

Incidence des IPP en France : baisse depuis l'introduction du… Prévenar 13

Données d'Epibac et du CNR pneumocoque

- Augmentation de la CV de 56% (cohorte naissance 2004) à 94% à partir de 2008
- Entre 2001-2002 et 2008-2009 augmentation de l'incidence des IPP sauf chez les moins de 2 ans
- Depuis l'introduction du Prévenar 13:

Baisse de l'incidence des IPP dans toutes les tranches d'âge

- 34% < 5 ans
- 50% 5-15 ans
- 15% chez l'adulte

Vaccine 33 (2015) 359–366

Contents lists available at ScienceDirect

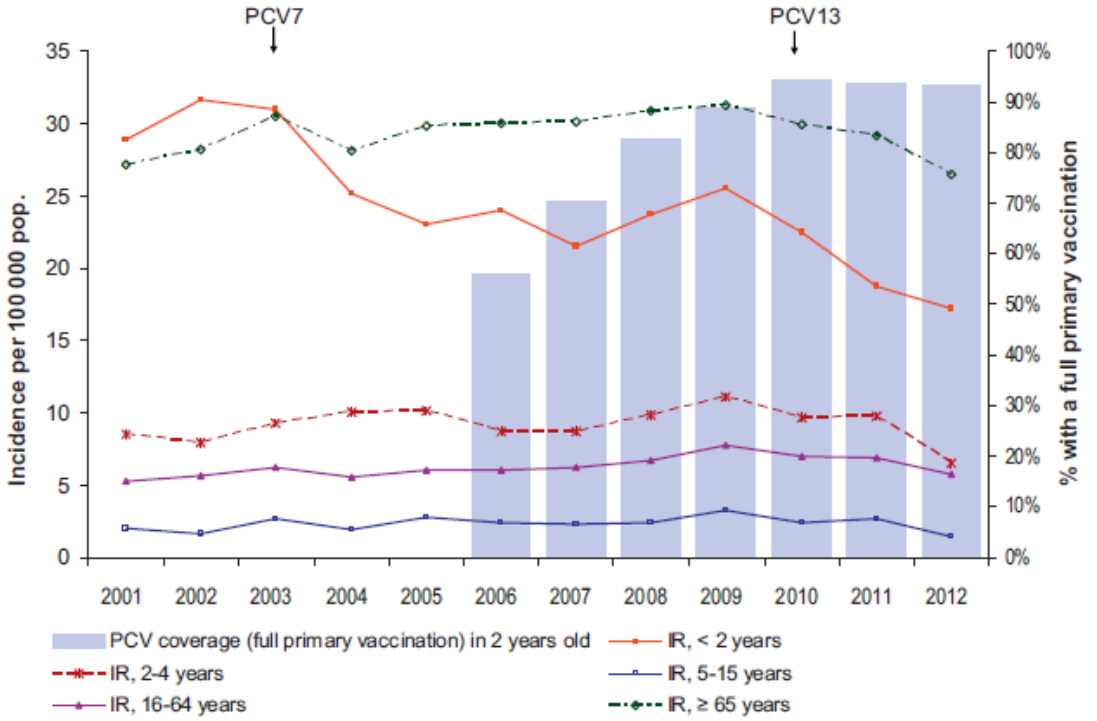
Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Impact of the pneumococcal conjugate vaccines on invasive pneumococcal disease in France, 2001–2012

A. Lepoutre[a,*], E. Varon[b], S. Georges[a], F. Dorléans[a], C. Janoir[b,c], L. Gutmann[b], D. Lévy-Bruhl[a], the Microbiologists of the Epibac[1] and the ORP Networks[2],

[a] Département des maladies infectieuses, Institut de Veille Sanitaire, Saint Maurice, France
[b] Centre National de Référence des Pneumocoques, AP-HP, Hôpital Européen Georges Pompidou, Paris, France
[c] Université Paris Sud, EA 4043 Châtenay-Malabry, France



Evolution des sérotypes des pneumocoques en cause dans les IIP de l'adulte en France 2001-2012

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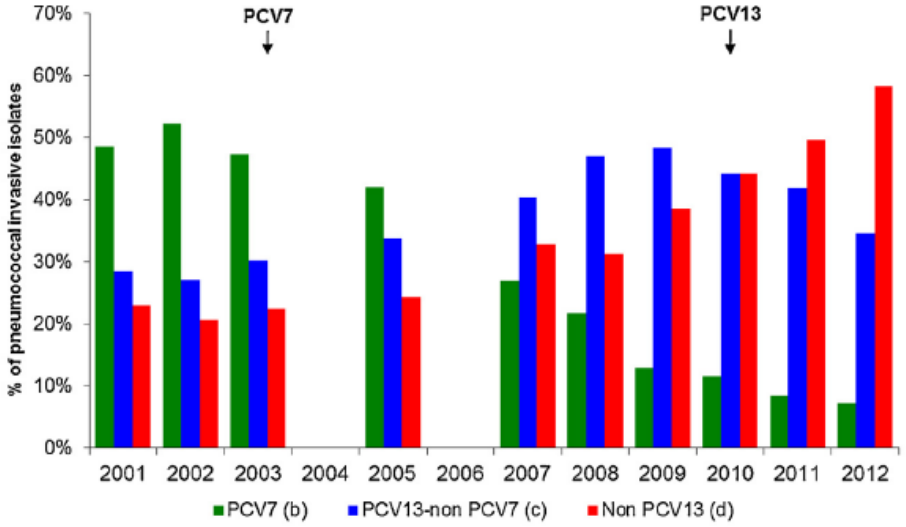

(a) The distribution of the three serotype-groups is standardized on the ratio of pneumococcal meningitis to other non meningitis pneumococcal invasive diseases cases in adults (>15 years), assessed from Epibac data for the respective time periods
(b) PCV7 : PCV7 serotypes including serotypes , 6B, 9V, 14, 18C, 19F and 23F
(c) PCV13-non PCV7 : PCV13-non PCV7 serotypes, including serotypes 1, 3, 5, 6A, 7F and 19A
(d) Non-PCV13 : other serotypes than PCV7 and PCV13-non PCV13

Un vaccin contre le zona efficace dans plus de 90% des cas

- Vaccin sous unitaire : glycoprotéine E (gE) du VZV
- Système adjuvant: $AS01_B$

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 MAY 28, 2015 VOL. 372 NO. 22

Efficacy of an Adjuvanted Herpes Zoster Subunit Vaccine in Older Adults

Table 2. Vaccine Efficacy against the First or Only Episode of Herpes Zoster Infection.*

Cohort and Age Group	HZ/su Group				Placebo Group				Vaccine Efficacy†
	No. of Participants	No. of Confirmed Cases	Cumulative Follow-up Period ‡ *person-yr*	Rate of Herpes Zoster *no./1000 person-yr*	No. of Participants	No. of Confirmed Cases	Cumulative Follow-up Period‡ *person-yr*	Rate of Herpes Zoster *no./1000 person-yr*	*% (95% CI)*
Modified vaccinated cohort									
All participants in cohort	7344	6	23,297.0	0.3	7415	210	23,170.5	9.1	97.2 (93.7–99.0)
50–59 yr	3492	3	11,161.3	0.3	3525	87	11,134.7	7.8	96.6 (89.6–99.3)
60–69 yr	2141	2	7,007.9	0.3	2166	75	6,952.7	10.8	97.4 (90.1–99.7)
70 yr or older	1711	1	5,127.9	0.2	1724	48	5,083.0	9.4	97.9 (87.9–100.0)
Total vaccinated cohort									
All participants in cohort	7698	9	25,584.5	0.4	7713	235	25,359.9	9.3	96.2 (92.7–98.3)
50–59 yr	3645	3	12,244.9	0.2	3644	95	12,162.5	7.8	96.9 (90.6–99.4)
60–69 yr	2244	5	7,674.1	0.7	2246	83	7,581.8	10.9	94.1 (85.6–98.1)
70 yr or older	1809	1	5,665.5	0.2	1823	57	5,615.6	10.2	98.3 (89.9–100.0)

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Table 3. Adverse Events and Reactogenicity.*

Variable	HZ/su Group		Placebo Group	
	no. of participants/total no.	*% (95% CI)*	*no. of participants/total no.*	*% (95% CI)*
Reactogenicity subgroup	4460		4466	
Within 30 days after vaccination				
Unsolicited report of adverse event	1308	29.3 (28.0–30.7)	1226	27.5 (26.1–28.8)
Grade 3 unsolicited report of adverse event†	208	4.7 (4.1–5.3)	151	3.4 (2.9–4.0)
Within 7 days after vaccination				
Solicited or unsolicited report of adverse event	3765	84.4 (83.3–85.5)	1689	37.8 (36.4–39.3)
Grade 3 solicited or unsolicited report of adverse event†	760	17.0 (15.9–18.2)	145	3.2 (2.7–3.8)
Grade 3 solicited or unsolicited report of adverse event related to vaccination	694	15.6 (14.5–16.7)	83	1.9 (1.5–2.3)
Solicited report of injection-site reaction	3571/4382	81.5 (80.3–82.6)	522/4377	11.9 (11.0–12.9)
Pain	3464/4382	79.1 (77.8–80.2)	490/4377	11.2 (10.3–12.2)
Redness	1664/4382	38.0 (36.5–39.4)	59/4377	1.3 (1.0–1.7)
Swelling	1153/4382	26.3 (25.0–27.6)	46/4377	1.1 (0.8–1.4)
Grade 3 solicited report of injection-site reaction†	417/4382	9.5 (8.7–10.4)	16/4377	0.4 (0.2–0.6)
Solicited report of systemic reaction	2894/4375	66.1 (64.7–67.6)	1293/4378	29.5 (28.2–30.9)
Myalgia	2025/4375	46.3 (44.8–47.8)	530/4378	12.1 (11.2–13.1)
Fatigue	2008/4375	45.9 (44.4–47.4)	728/4378	16.6 (15.5–17.8)
Headache	1716/4375	39.2 (37.8–40.7)	700/4378	16.0 (14.9–17.1)
Shivering	1232/4375	28.2 (26.8–29.5)	259/4378	5.9 (5.2–6.7)
Fever	939/4375	21.5 (20.3–22.7)	132/4378	3.0 (2.5–3.6)
Gastrointestinal symptoms	788/4375	18.0 (16.9–19.2)	387/4378	8.8 (8.0–9.7)
Grade 3 solicited report of systemic reaction†	498/4375	11.4 (10.5–12.4)	106/4378	2.4 (2.0–2.9)
Total vaccinated cohort	7698		7713	
Throughout study period				
Serious adverse event‡	689	9.0 (8.3–9.6)	686	8.9 (8.3–9.6)
Potential immune-mediated disease	78	1.0 (0.8–1.3)	97	1.3 (1.0–1.5)
Death	167	2.2 (1.9–2.5)	174	2.3 (1.9–2.6)
Within 30 days after vaccination				
Serious adverse event‡	87	1.1 (0.9–1.4)	97	1.3 (1.0–1.5)
Serious adverse event related to vaccination§	1	0.0 (0.0–0.1)	3	0.0 (0.0–0.1)
Death	8	0.1 (0.0–0.2)	7	0.1 (0.0–0.2)

Mosquirix™: Vaccin RTS,S vaccin contre le paludisme et l'hépatite B

Protéine recombinante:
protéine de surface de *P falciparum*
combinée à l'AgHBs
+ Système adjuvant AS01B

- 8922 enfants 5-17 mois
- 6527 nourrissons de 6-12 semaines
- 11 centres/7 pays africains

- 3 groupes:
  - 3 doses RTS,S : J0, M1, M2 rappel M20
  - 3 doses RTS,S et vaccin comparateur à M20
  - Bras control

Articles

Efficacy and safety of RTS,S/AS01 malaria vaccine with or without a booster dose in infants and children in Africa: final results of a phase 3, individually randomised, controlled trial

RTS,S Clinical Trials Partnership*

www.thelancet.com Vol 386 July 4, 2015

Efficacité sur les cas graves de paludisme

Efficacy and safety of RTS,S/AS01 malaria vaccine with or without a booster dose in infants and children in Africa: final results of a phase 3, individually randomised, controlled trial

*RTS,S Clinical Trials Partnership**

	C3C group			R3C group			R3R group			Point estimate of VE unadjusted for covariates R3C *vs* C3C		Point estimate of VE unadjusted for covariates R3R *vs* C3C	
	N	n	Proportion affected*	N	n	Proportion affected*	N	n	Proportion affected*	VE (95% CI)	p value	VE (95% CI)	p value
5–17 months age category													
Month 0 to study end	2974	171	0·06	2972	169	0·06	2976	116	0·04	1·1% (−23·0 to 20·5)	0·96	32·2% (13·7 to 46·9)	0·0009
Months 0–32	2974	152	0·05	2972	145	0·05	2976	99	0·03	4·5% (−20·6 to 24·5)	0·72	34·9% (15·6 to 50·0)	0·0006
Months 0–20†	2974	118	0·04	5949	156	0·03	5949	156	0·03	33·9% (15·3 to 48·3)	0·0007	..	..
Months 21–32	2701	42	0·02	2717	61	0·02	2679	43	0·02	−44·4% (−119·0 to 4·1)	0·073	−3·2% (−61·8 to 34·1)	0·91
Month 33 to study end	2309	20	0·01	2267	31	0·01	2236	23	0·01	−57·9% (−192·0 to 12·8)	0·12	−18·8% (−128·0 to 37·6)	0·65
Month 21 to study end	2702	62	0·02	2719	88	0·03	2681	64	0·02	−41·0% (−98·5 to −0·8)	0·038	−4·0% (−50·0 to 27·8)	0·86
6–12 weeks age category													
Month 0 to study end	2179	116	0·05	2178	104	0·05	2180	96	0·04	10·3% (−17·9 to 31·8)	0·45	17·3% (−9·4 to 37·5)	0·16
Months 0–32	2179	101	0·05	2178	93	0·04	2180	89	0·04	7·9% (−23·3 to 31·2)	0·61	11·9% (−18·3 to 34·5)	0·37
Months 0–20†	2179	66	0·03	4358	121	0·03	4358	121	0·03	8·3% (−25·7 to 32·6)	0·58	..	..
Months 21–32	1976	43	0·02	1995	40	0·02	1966	29	0·01	7·9% (−45·1 to 41·6)	0·74	32·2% (−11·1 to 59·2)	0·12
Month 33 to study end	1657	16	0·01	1658	14	0·01	1654	12	0·01	12·6% (−91·2 to 60·5)	0·72	24·9% (−69·3 to 67·6)	0·57
Month 21 to study end	1976	58	0·03	1996	52	0·03	1966	39	0·02	11·2% (−31·3 to 40·2)	0·56	32·4% (−3·2 to 56·2)	0·064

Analyses were by modified intention to treat. p values were calculated using a two-sided Fisher's exact test. C3C=control group. N=number of participants. n=number of participants with at least one event in each group. R3C=RTS,S/AS01 primary schedule without booster. R3R=RTS,S/AS01 primary schedule with booster. VE=vaccine efficacy (1–relative risk for severe malaria). *Proportion of participants who reported at least one event. †Data from a previous analysis that compared R3R plus R3C with C3C.

Table 2: **Efficacy against severe malaria (primary case definition) of a primary schedule with or without a booster dose**

Mosquirix recommandations de l'OMS Novembre 2015

- le paludisme touche environs 200 000 millions de personnes par an en Afrique, environs 600.000 morts chaque année (82% < 5ans)
- *« …le premier facteur de mortalité sur ce Continent reste le paludisme »*, a rapporté le Pr Jon Abramson, président du Groupe stratégique consultatif d'experts de l'OMS (SAGE) sur la vaccination. Il précise également que *« les tests pourraient ouvrir la voie à une utilisation à grande échelle du vaccin au cours des cinq prochaines années »*.

- Phase pilote: distribution dans 3-5 pays
- quatre injections : première dose serait administrée à des enfants âgés de cinq à 17 mois afin d'évaluer son effet protecteur.

Dengvaxia: un vaccin chimére dengue-fièvre jaune

- Analyse poolée de 4 essais cliniques
- 35 000 enfants, 2-16 ans
- Efficacité sur les hospitalisations pour dengue documentée jusqu'à 6 ans

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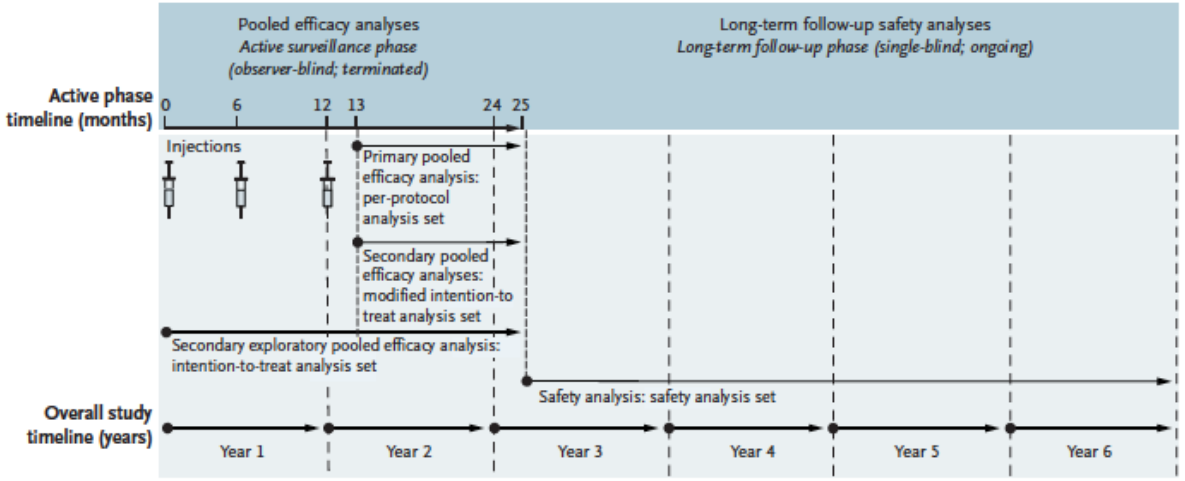
ESTABLISHED IN 1812 SEPTEMBER 24, 2015 VOL. 373 NO. 13

Efficacy and Long-Term Safety of a Dengue Vaccine in Regions of Endemic Disease

S.R. Hadinegoro, J.L. Arredondo-García, M.R. Capeding, C. Deseda, T. Chotpitayasunondh, R. Dietze, H.I. Hj Muhammad Ismail, H. Reynales, K. Limkittikul, D.M. Rivera-Medina, H.N. Tran, A. Bouckenooghe, D. Chansinghakul, M. Cortés, K. Fanouillere, R. Forrat, C. Frago, S. Gailhardou, N. Jackson, F. Noriega, E. Plennevaux, T.A. Wartel, B. Zambrano, and M. Saville, for the CYD-TDV Dengue Vaccine Working Group*

N ENGL J MED 373;13 NEJM.ORG SEPTEMBER 24, 2015



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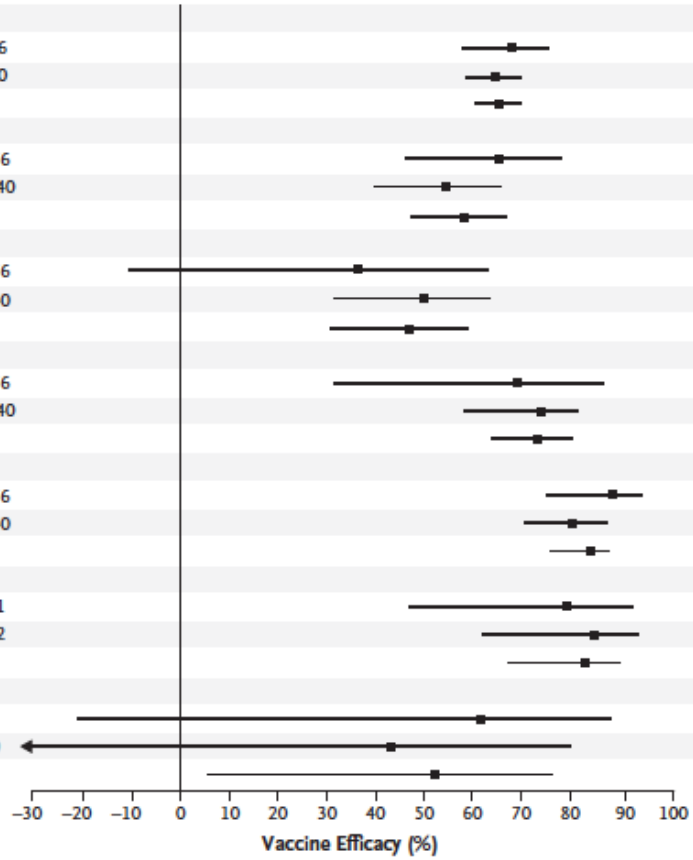
A Participants 9 Yr of Age or Older

Serotype and Trial	Vaccine Group (no. of cases/total no.)	Control Group (no. of cases/total no.)	Vaccine Efficacy (95% CI)
All serotypes			
CYD14	90/3316	136/1656	67.8 (57.7 to 75.6)
CYD15	277/13,914	385/6940	64.7 (58.7 to 69.8)
CYD14+CYD15			65.6 (60.7 to 69.9)
Serotype 1			
CYD14	36/3316	52/1656	65.7 (46.6 to 78.2)
CYD15	99/13,914	109/6940	54.8 (40.2 to 65.9)
CYD14+CYD15			58.4 (47.7 to 66.9)
Serotype 2			
CYD14	33/3316	26/1656	36.8 (–10.1 to 63.3)
CYD15	84/13,914	84/6940	50.2 (31.8 to 63.6)
CYD14+CYD15			47.1 (31.3 to 59.2)
Serotype 3			
CYD14	11/3316	18/1656	69.5 (31.9 to 87.0)
CYD15	55/13,914	106/6940	74.2 (63.9 to 81.7)
CYD14+CYD15			73.6 (64.4 to 80.4)
Serotype 4			
CYD14	10/3316	41/1656	87.9 (75.5 to 94.6)
CYD15	32/13,914	83/6940	80.9 (70.9 to 87.7)
CYD14+CYD15			83.2 (76.2 to 88.2)
Seropositive at baseline			
CYD14	7/487	17/251	79.2 (47.2 to 92.7)
CYD15	8/1073	23/512	83.7 (62.2 to 93.7)
CYD14+CYD15			81.9 (67.2 to 90.0)
Seronegative at baseline			
CYD14	7/129	8/59	61.6 (–21.1 to 88.1)
CYD15	9/258	9/149	43.2 (–61.6 to 80.0)
CYD14+CYD15			52.5 (5.9 to 76.1)



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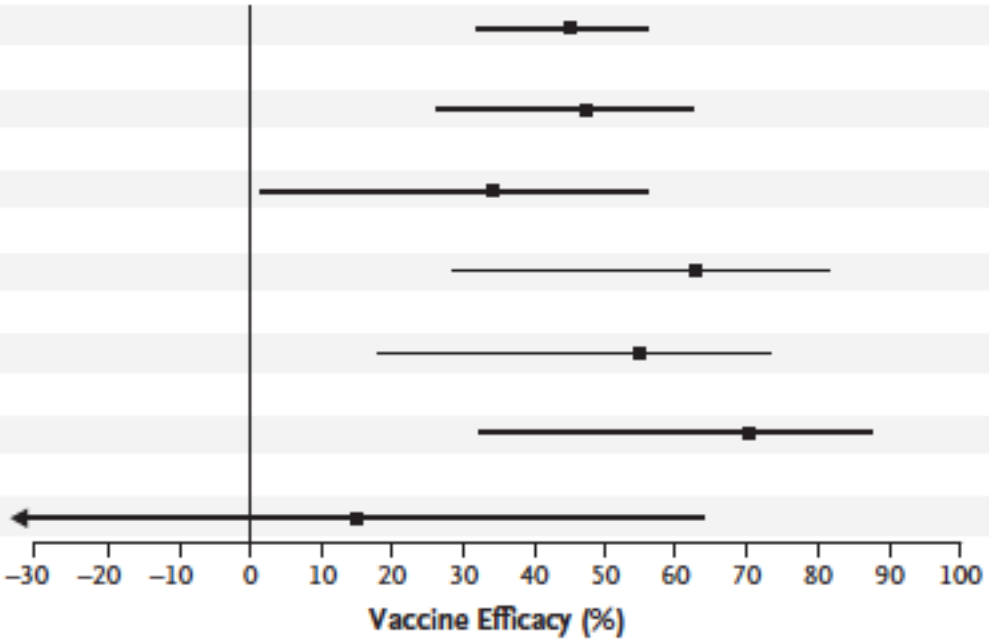
B Participants under 9 Yr of Age

Serotype in Trial CYD14	Vaccine Group (no. of cases/total no.)	Control Group (no. of cases/total no.)	Vaccine Efficacy (95% CI)
All serotypes	196/3532	173/1768	44.6 (31.6 to 55.0)
Serotype 1	80/3532	74/1768	46.6 (25.7 to 61.5)
Serotype 2	64/3532	48/1768	33.6 (1.3 to 55.0)
Serotype 3	19/3532	25/1768	62.1 (28.4 to 80.3)
Serotype 4	30/3532	31/1768	51.7 (17.6 to 71.8)
Seropositive at baseline	11/414	17/193	70.1 (32.3 to 87.3)
Seronegative at baseline	13/295	10/157	14.4 (−111 to 63.5)



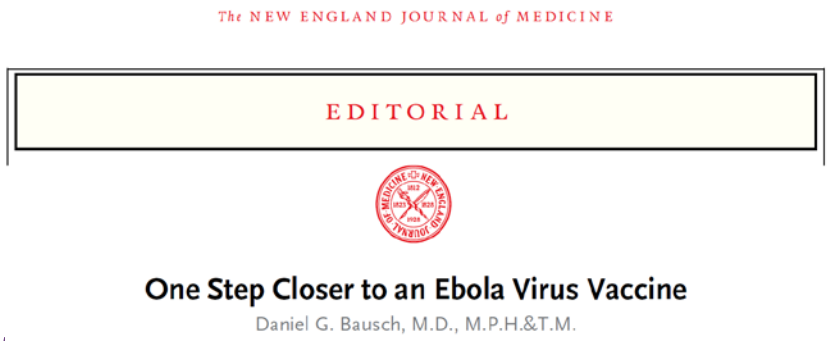
Un vaccin efficace contre Ebola?

Vaccins utilisant des vecteurs viraux pour présenter la glycoprotéine du virus Ebola

•cAd3-ZEBOV: adenovirus du chimpanzé non replicatif bivalent (2 souches les + virulentes Zaïre et Soudan), développé par GSK et le NIH

•rVSV-ZEBOV: virus de la stomatite vésiculaire (VSV) réplicatif, développé par Agence de Santé Publique du Canada (License Newlinks Genetics) racheté par Merck

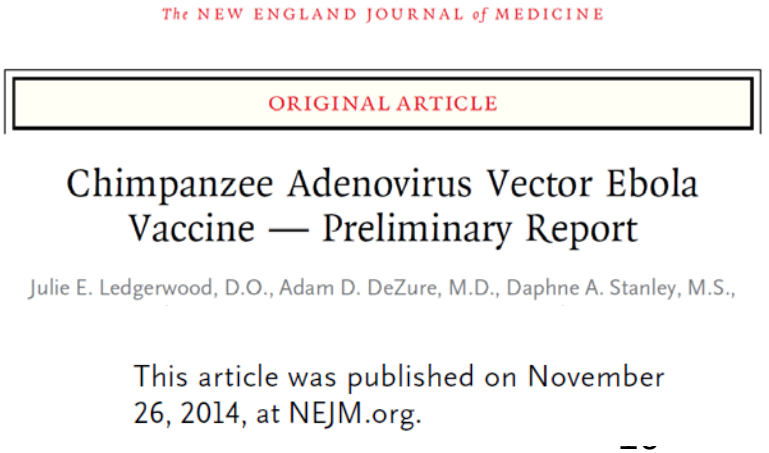
•Prime boost Ad26.ZEBOV et MVA-BN-Filo (programme IMI : Inserm-Janssen):


The NEW ENGLAND JOURNAL of MEDICINE

EDITORIAL

One Step Closer to an Ebola Virus Vaccine

Daniel G. Bausch, M.D., M.P.H.&T.M.


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Chimpanzee Adenovirus Vector Ebola Vaccine — Preliminary Report

Julie E. Ledgerwood, D.O., Adam D. DeZure, M.D., Daphne A. Stanley, M.S.,

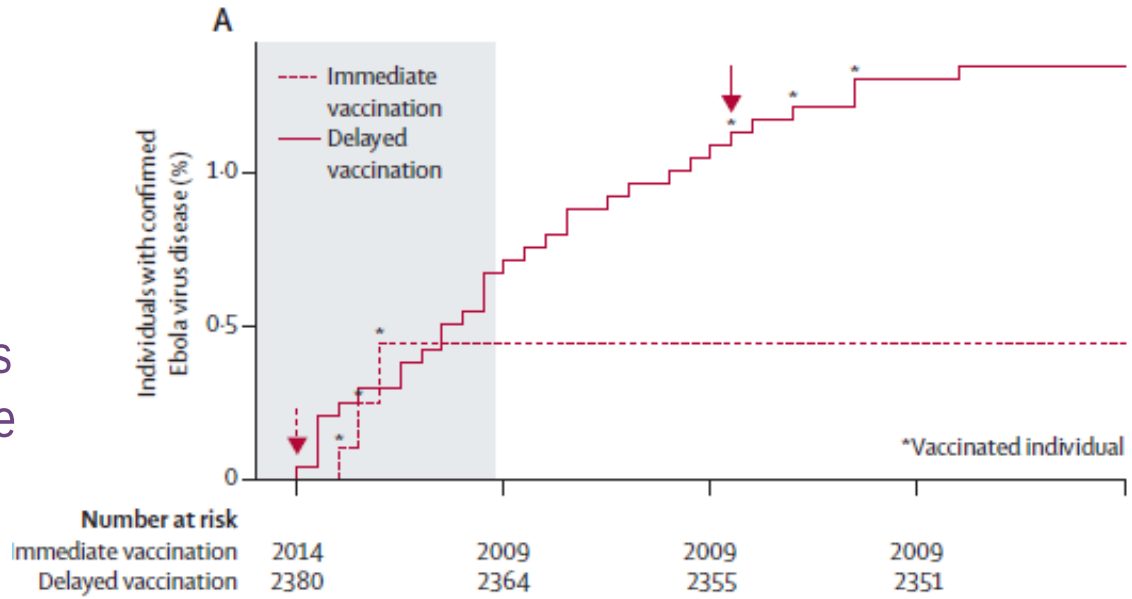
This article was published on November 26, 2014, at NEJM.org.

Efficacy and effectiveness of an rVSV-vectored vaccine expressing Ebola surface glycoprotein: interim results from the Guinea ring vaccination cluster-randomised trial

Ana Maria Henao-Restrepo, Ira M Longini, Matthias Egger, Natalie E Dean, W John Edmunds, Anton Camacho, Miles W Carroll, Moussa Doumbia, Bertrand Draguez, Sophie Duraffour, Godwin Enwere, Rebecca Grais, Stephan Gunther, Stefanie Hossmann, Mandy Kader Kondé, Souleymane Kone, Eeva Kuisma, Myron M Levine, Sema Mandal, Gunnstein Norheim, Ximena Riveros, Aboubacar Soumah, Sven Trelle, Andrea S Vicari, Conall H Watson, Sakoba Kéïta, Marie Paule Kieny*, John-Arne Røttingen*

- Essai randomisé en anneau:
-Randomisation des **contacts d'un cas et des contacts des contacts**
-2 groupes: vaccination immédiate ou vaccination différée à 21j (1 dose)

- **Résultats**
-> 10j suivant la vaccination : 0 cas dans le bras vaccination immédiate vs 16 cas dans le bras différé



- Efficacité vaccinale : 100% (CI 95%; 74,7%-100.0%: p=0,0036)

Vaccination contre la grippe de la femme enceinte

Etude prospective comparative contre vaccin méningo quadrivalent conjugué réalisée au Mali, vaccination 3e trimestre de grossesse

- 4193 femmes randomisées et vaccinées : 2018 avec le vaccin grippe trivalent, 2085 avec le vaccin meningo quadrivalent conjugué

Efficacité sur le 1er épisode de grippe documentée par PCR

- Chez les mère: 70.3% (IC95% 42.2-85.8)
- Chez l'enfant :
  33.3% (IC95% 3.7-53.9) ITT
  37.3% (IC95% 7.6-57.8) Per protocol analysis (vaccination au moins 14j avant l'accouchement)

Articles

Maternal immunisation with trivalent inactivated influenza vaccine for prevention of influenza in infants in Mali: a prospective, active-controlled, observer-blind, randomised phase 4 trial

Milagritos D Tapia, Samba O Sow, Boubou Tamboura, Ibrahima Téguété, Marcela F Pasetti, Mamoudou Kodio, Uma Onwuchekwa, Sharon M Tennant, William C Blackwelder, Flanon Coulibaly, Awa Traoré, Adama Mamby Keita, Fadima Cheick Haidara, Fatoumata Diallo, Moussa Doumbia, Doh Sanogo, Ellen DeMatt, Nicholas H Schluterman, Andrea Buchwald, Karen L Kotloff, Wilbur H Chen, Evan W Orenstein, La

www.thelancet.com/infection **Published online May 31, 2016 http://dx.doi.org/10.1016/S1473-3099(16)30054-8**

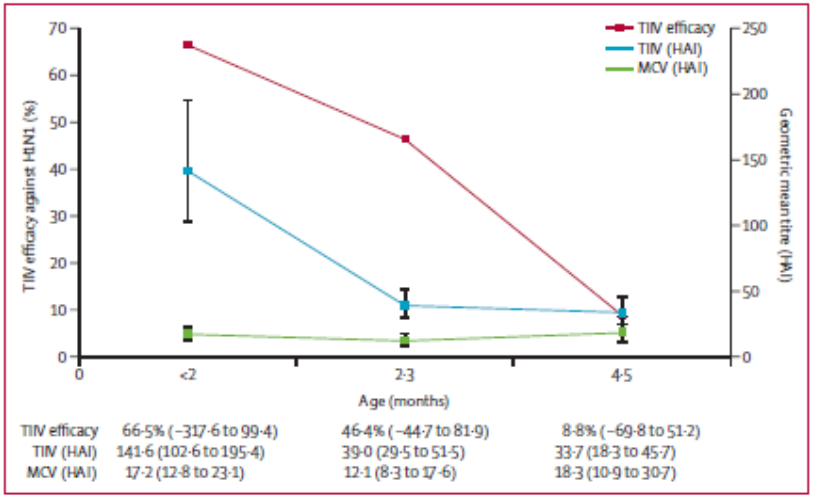


Figure 2: Vaccine efficacy and HAI antibody geometric mean titres in infants, by age and maternal vaccine group
Error bars and data in parentheses show 95% CIs. TIV=trivalent inactivated influenza vaccine. MCV=quadrivalent meningococcal conjugate vaccine. HAI=hemagglutination inhibition antibodies.

Clinical Infectious Diseases

MAJOR ARTICLE

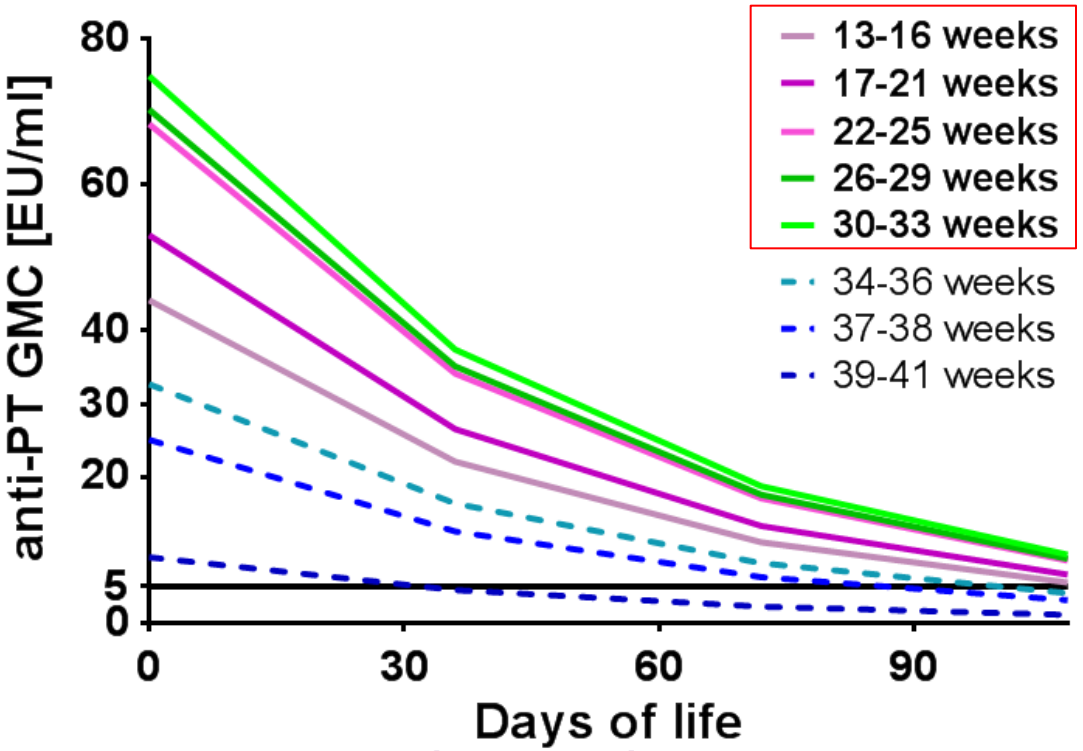
Maternal Immunization Earlier in Pregnancy Maximizes Antibody Transfer and Expected Infant Seropositivity Against Pertussis

Christiane S. Eberhardt,[1,2] Geraldine Blanchard-Rohner,[3] Barbara Lemaître,[1] Meriem Boukrid,[4] Christophe Combescure,[5] Véronique Othenin-Girard,[4] Antonina Chilin,[4] Jean Petre,[6] Begoña Martinez de Tejada,[4] and Claire-Anne Siegrist[1,3]

A quel terme de grossesse vacciner ?
On pensait que c'était mieux en fin de grossesse,
Au 3èmetrimestre

New

Meilleur transfert passif d'anticorps lorsque la vaccination a été effectuée plus tôt…



- Vacciner plus tôt induit des taux d'Ac chez l'enfant > que vacciner plus tard
- Pas de corrélation directe entre le taux d'Ac de la mère et les taux chez l'enfant.
- Ce qui compte, c'est le pic pendant la période de transfert des AC et la durée du transfert (≈ AUC).

Eberhardt CS. et al. Clin Infect Dis 2016

Et le CMV??

Vaccine 34 (2016) 313–319

Contents lists available at ScienceDirect

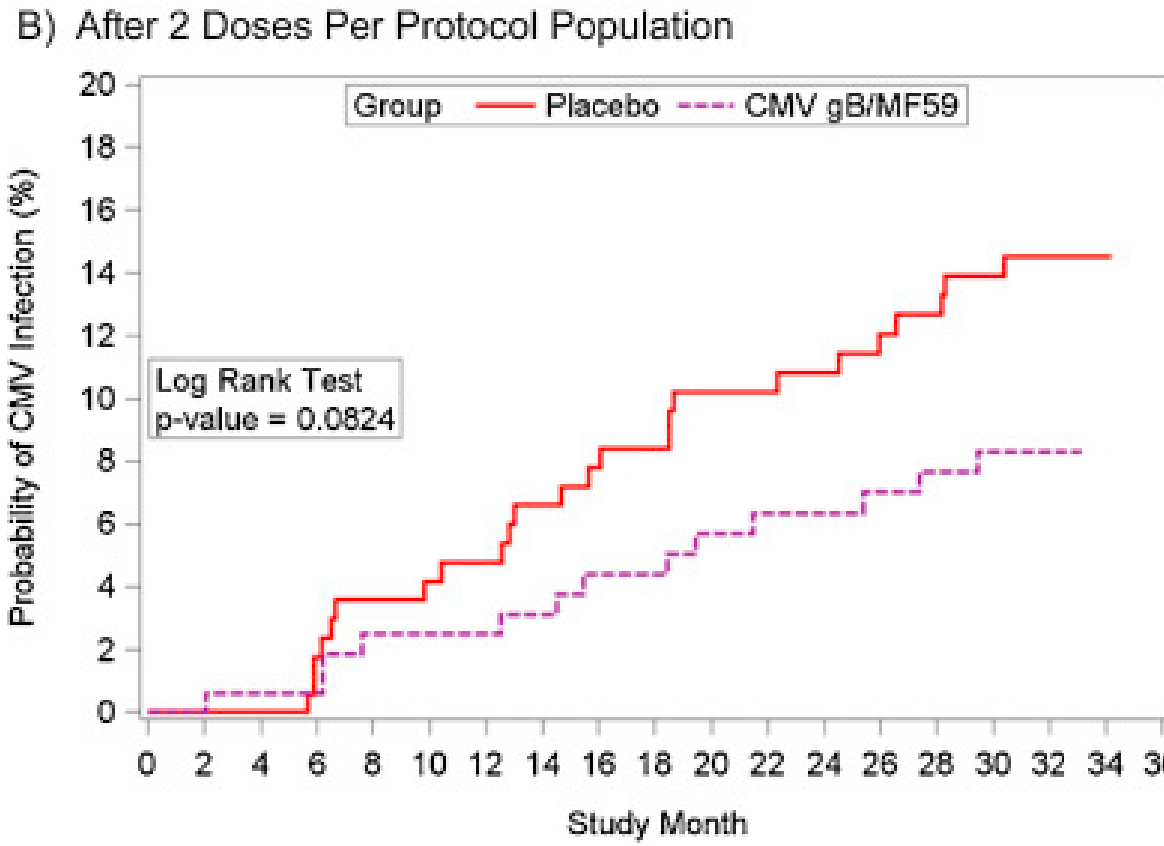
Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Safety and efficacy of a cytomegalovirus glycoprotein B (gB) vaccine in adolescent girls: A randomized clinical trial

David I. Bernstein[a,*], Flor M. Munoz[b], S. Todd Callahan[c], Richard Rupp[d],

- 402 jeunes filles 12-17 ans
- gB adjuvantée MF59
- 3 injections M0, M1, M6
- Infection CMV (¨CR urines et/ou séroconversion)
- Efficacité vaccinale : 43% 95%CI: -36; 76% (p=0.20)



Vaccination et grossesse : perspectives

Comment

Group B streptococcal maternal vaccination, the goal is near

Infections are the foremost cause of neonatal mortality worldwide, and group B streptococcus (GBS) remains a leading cause of neonatal sepsis and meningitis.[1,2] In *The Lancet Infectious Diseases*, Shabir Madhi and colleagues[3] report the first phase 1b/2 randomised trial on a trivalent GBS vaccine in 60 non-pregnant and 320 pregnant (in the third trimester) healthy black African women.[4]

In many high-income countries, prevention guide- maternal protective immunity, resulting in a specific transplacental IgG passage. IgG transfer would protect neonates from birth through the first weeks post-partum, when late-onset disease occurs.

Madhi and colleagues[3] present results from their large and challenging randomised trial on a new capsular polysaccharide trivalent vaccine, based on CRM_{197} as the conjugate protein. The capsular polysaccharide represented serotypes Ia, Ib and III, which are associated

Articles

Safety and immunogenicity of an investigational maternal trivalent group B streptococcus vaccine in healthy women and their infants: a randomised phase 1b/2 trial

Shabir A Madhi, Clare L Cutland, Lisa Jose, Anthonet Koen, Niresha Govender, Frederick Wittke, Morounfolu Olugbosi*

www.thelancet.com/infection **Published online April 29, 2016 http://dx.doi.org/10.1016/S1473-3099(16)00152-3**

- Strepto B

  Vaccin polyosidique conjugué

  sérotypes Ia, Ib, et III

- VRS

  nanoparticule dirigée contre la protéine de fusion du VRS

The Journal of Infectious Diseases

MAJOR ARTICLE

A Randomized, Blinded, Controlled, Dose-Ranging Study of a Respiratory Syncytial Virus Recombinant Fusion (F) Nanoparticle Vaccine in Healthy Women of Childbearing Age

Gregory M. Glenn,[1] Louis F. Fries,[1] D. Nigel Thomas,[1] Gale Smith,[1] Eloi Kpamegan,[1] Hanxin Lu,[1] David Flyer,[1] Dewal Jani,[1] Sonia P. Hickman,[1] and Pedro A. Piedra[2]

[1]Novavax, Inc, Gaithersburg, Maryland; and [2]Department of Molecular Virology and Microbiology, and Pediatrics, Baylor College of Medicine, Houston, Texas

Vaccination contre l'hépatite B des populations immunodéprimées: intérêt de schémas intensifiés chez les patients vivant avec le VIH

- persistance de la réponse avec primo vaccination par 4 injections double dose

Research

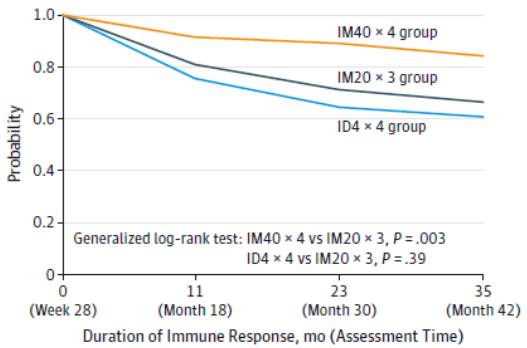
Original Investigation

Long-term Immune Response to Hepatitis B Virus Vaccination Regimens in Adults With Human Immunodeficiency Virus 1

Secondary Analysis of a Randomized Clinical Trial

Odile Launay, MD, PhD; Arielle R. Rosenberg, MD, PhD; David Rey, MD; Noelle Pouget, PhD; Marie-Louise Michel, PhD; Jacques Reynes, MD, PhD; Didier Neau, MD, PhD; Francois Raffi, MD, PhD; Lionel Piroth, MD, PhD; Fabrice Carrat, MD, PhD; for the ANRS HB03 VIHVAC-B (Trial Comparing 3 Strategies of Vaccination Against the Virus of Hepatitis B in HIV-Infected Patients) Group

Figure 1. Duration of Immune Response



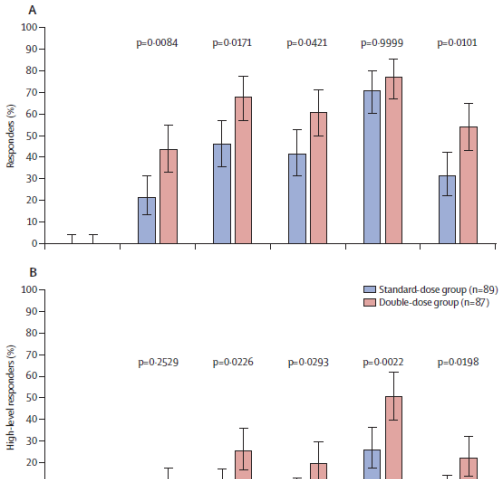
No. at risk				
IM20 × 3 group	91	68	56	46
IM40 × 4 group	119	106	95	81
ID4 × 4 group	108	77	60	49

Articles

Safety and immunogenicity of double-dose versus standard-dose hepatitis B revaccination in non-responding adults with HIV-1 (ANRS HB04 B-BOOST): a multicentre, open-label, randomised controlled trial

David Rey, Lionel Piroth, Marie-Josée Wendling, Patrick Miailhes, Marie-Louise Michel, Cécilie Dufour, Georges Haour, Philippe Sogni, Alexandra Rohel, Faiza Ajana, Eric Billaud, Jean-Michel Molina, Odile Launay, Fabrice Carrat, and the ANRS HB04 B-BOOST study group*

- supériorité de la vaccination par 3 double doses chez des non repondeurs



The Journal of Infectious Diseases

MAJOR ARTICLE

Vaccination Against Hepatitis B Virus (HBV) in HIV-1–Infected Patients With Isolated Anti–HBV Core Antibody: The ANRS HB EP03 CISOVAC Prospective Study

Lionel Piroth,[1] Odile Launay,[2] Marie-Louise Michel,[3] Abderrahmane Bourredjem,[4] Patrick Miailhes,[5] Faiza Ajana,[6] Catherine Chirouze,[7] David Zucman,[8] Marie-Josee Wendling,[9] Dani Nazzal,[2] Fabrice Carrat,[10,11,12] David Rey,[13] and Christine Binquet[4]; the ANRS HB EP03 CISOVAC Study Group

La “Vaccine hesitancy”!

Vaccine 33 (2015) D66–D71

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Vaccine hesitancy
Causes, consequences, and a call to action

Daniel A. Salmon[a,b,*], Matthew Z. Dudley[b], Jason M. Glanz[c,d], Saad B. Omer[e]

[a] Departments of International Health and Health, Behavior, and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States
[b] Institute for Vaccine Safety, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States
[c] Institute for Health Research, Kaiser Permanente Colorado, Denver, CO, United States
[d] Department of Epidemiology, Colorado School of Public Health, Aurora, CO, United States
[e] Rollins School of Public Health, Emory University, Atlanta, GA, United States

- Définition OMS (Strategic Advisory Group of Experts (SAGE): « *delay in acceptance or refusal of vaccines despite availability of vaccinations services* ».
- Hésitation vis-à-vis de la décision de se vacciner ou de faire vacciner ses enfants
- Nombreux facteurs:
  - le vaccin victime de son succès
  - les polémiques autour des effets indésirables attribués aux vaccins: autisme, diabète, allergie; maladies auto immunes..
  - le manque de confiance dans les autorités de santé
  - les vaccins profitent aux industriels
  - on préfère des produits « naturels » voire des « vaccins homéopathiques »….
  - un changement des relations avec les parents et les patients, nécessité de pouvoir expliquer l’intérêt du vaccin
  - internet et la rapidité de diffusion d’effets indésirables potentiellement imputés aux vaccins…

Et chez les professionnels de santé?

EBioMedicine 2 (2015) 889–895

Contents lists available at ScienceDirect

EBioMedicine

journal homepage: www.ebiomedicine.com

Original Article

Vaccine Hesitancy Among General Practitioners and Its Determinants During Controversies: A National Cross-sectional Survey in France

Pierre Verger [a,b,c,d,*], Lisa Fressard [a,b,c], Fanny Collange [a,b,c], Arnaud Gautier [e], Christine Jestin [e], Odile Launay [d,f], Jocelyn Raude [g], Céline Pulcini [h,i], Patrick Peretti-Watel [a,b,c]

Practices, opinions, and attitudes of GPs regarding vaccination (weighted data, N = 1582).

Frequency of vaccine recommendations (line %)	Never	Sometimes	Often	Always
MMR to non-immune adolescents and young adults	4.3	12.9	22.9	59.9
Meningococcal meningitis C to ages 2–24 (catch-up)[a]	17.6	25.7	23.4	33.3
Meningococcal meningitis C to 12-month-old infants	15.7	16.7	15.9	51.7
Human papilloma virus vaccine to girls aged 11–14[b]	10.5	17.2	26.8	45.6
Hepatitis B to adolescents (catch-up)	10.9	26.0	29.1	34.0
Seasonal influenza to adults under 65 with diabetes	4.5	11.6	26.2	57.6

16% à 43% des médecins généralistes interrogés ne recommandent jamais ou seulement quelquefois au moins un des vaccins du calendrier vaccinal

Perceptions of vaccines utility (line %)	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Today some vaccines recommended by authorities are not useful[b]	38.3	35.3	20.0	6.4
Children are vaccinated against too many diseases[b]	53.1	26.7	14.6	5.5
Self-efficacy: confidence in one's ability to explain vaccines (line %)	**Very unconfident**	**Somewhat unconfident**	**Somewhat confident**	**Very confident**
Vaccine utility	0.9	2.9	41.7	54.5
Vaccine safety[a]	2.2	15.8	55.7	26.2
Role of adjuvants	11.1	45.7	32.2	11.0

En analyse multivariée, les médecins vont recommander
- plus souvent les vaccins : s'ils se sentent à l'aise pour expliquer les bénéfices et les risques aux patients et s'ils ont confiance dans les sources officielles d'information
- moins souvent s'ils ont la sensation d'effets indésirables fréquents ou qu'ils doutent sur l'utilité du vaccin

Merci pour votre attention!