Profilassi vaccinale in popolazioni speciali: pazienti HIV positivi

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OSPEDALE
SAN RAFFAELE

SIMIT
Società Italiana
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In collaborazione con:

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Sezioni L e M del Comitato Tecnico Sanitario

- Vaccinazione anti influenzale
- Vaccinazione anti pneumococcica
- Vaccinazione anti meningococcica (ACWY e B)
- Vaccinazione anti HAV
- Vaccinazione anti HBV
- Vaccinazione anti HPV

Ambulatorio vaccinale CSL

- Vaccinazione anti pneumococcica: 1197 pts
- Vaccinazione anti meningococcica ACWY: 454 pts
- Vaccinazione antimeningococcica B: 486 pts
- Vaccinazione anti HAV: 582 pts
- Vaccinazione anti HBV: 555 pts
- Vaccinazione anti HPV: 31 pts

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SPECIAL FEATURES: CLINICAL CONCEPTS

Meningococcal Vaccination in Men Who Have Sex with Men

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RESEARCH ARTICLE

Presence of multiple genotypes in subjects with HPV-16 infection is highly associated with anal squamous intraepithelial lesions in HIV-1 infected males

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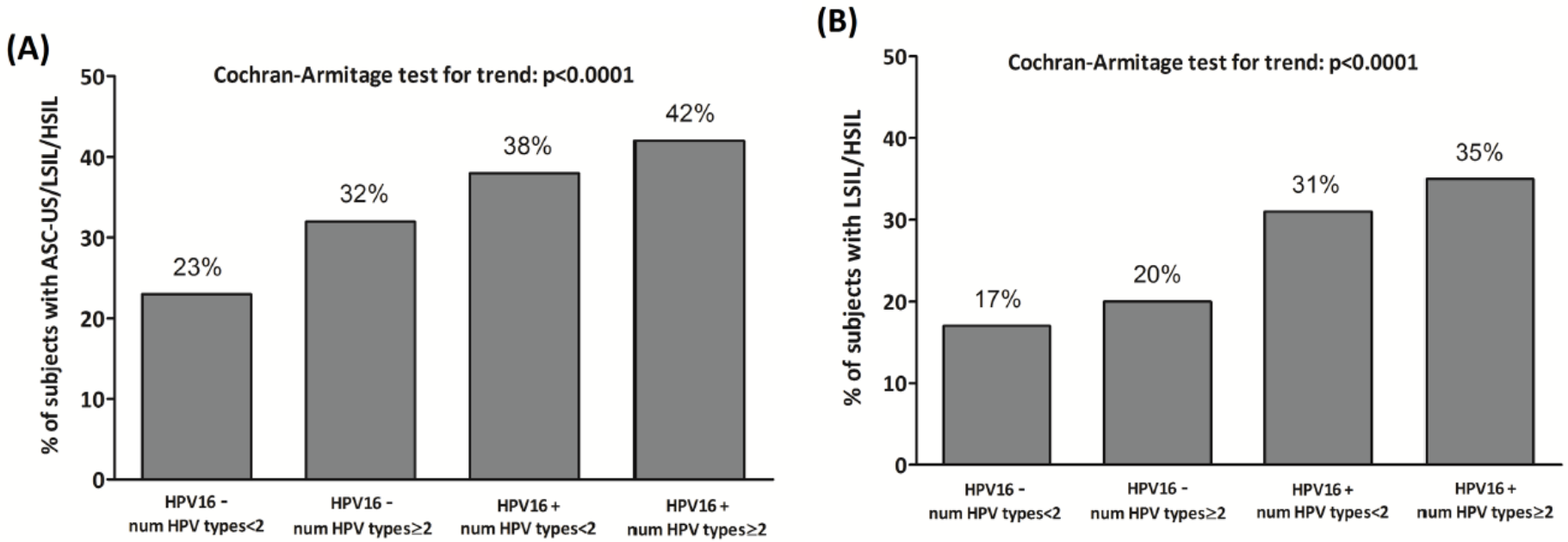
Table 1. Patients' characteristics.

	ALL (n = 875)	No lesion (n = 621)	ASC-US (n = 63)	LSIL (n = 142)	HSIL (n = 49)	P-value
Age *(years)*	43.1 (35.9–50.1)	43.2 (36.4–50.3)	42.2 (34.1–49.7)	42.3 (34.9–48.6)	43.4 (35.9–52.0)	0.279
HIV Risk factor						0.698
Men who have sex with men	696 (80%)	494 (80%)	49 (78%)	111 (78%)	42 (86%)	
Other	179 (20%)	127 (20%)	14 (22%)	31 (22%)	7 (14%)	
Years since first HIV positive test	7.9 (2.5–16.3)	8.3 (2.7–16.6)	4.4 (1.1–14.7)	6.7 (2.4–15.1)	9.9 (4.7–17.8)	0.025
Naïve	15 (1.7%)	10 (1.6%)	2 (3.1%)	3 (2.1%)	0	0.609
Duration of HAART *(years)*	5.2 (1.2–13.8)	5.8 (1.7–14.1)	2.1 (0.7–9.0)	3.7 (0.9–13.1)	6.7 (1.0–15.9)	0.004
Previous syphilis infection	490 (56%)	329 (53%)	37 (59%)	87 (61%)	37 (76%)	0.009
Ab anti-HCV						0.839
Negative	739 (84%)	523 (84%)	56 (89%)	119 (84%)	41 (84%)	
Positive	113 (13%)	80 (13%)	6 (10%)	21 (15%)	6 (12%)	
Unknown	23 (3%)	18 (3%)	1 (1%)	2 (1%)	2 (4%)	
HBsAg						0.325
Negative	668 (76%)	476 (77%)	48 (76%)	110 (78%)	34 (69%)	
Positive	55 (6%)	45 (7%)	2 (3%)	6 (4%)	2 (4%)	
Unknown	152 (17%)	100 (16%)	13 (21%)	26 (18%)	13 (27%)	
Previous AIDS diagnosis	89 (10%)	57 (9%)	4 (6%)	14 (10%)	14 (29%)	0.0002
Nadir CD4+ *(cells/μL)*	319 (221–456)	319 (223–457)	367 (183–493)	308 (225–442)	308 (153–450)	0.832
CD4+ *(cells/μL)*	675 (522–874)	682 (539–880)	637 (450–835)	667 (492–831)	643 (455–838)	0.122
CD4%	29.6 (24.5–35.0)	30.2 (25.9–35.8)	27.7 (23.0–33.3)	28.1 (23.0–33.4)	26.0 (20.4–33.7)	<0.0001
CD4+/CD8+ ratio	0.73 (0.51–1.01)	0.76 (0.54–1.04)	0.63 (0.40–0.88)	0.63 (0.47–0.93)	0.57 (0.38–0.91)	0.0002
Pre-ART HIV-RNA *(log_{10} cps/mL)*	4.89 (4.21–5.32)	4.88 (4.13–5.34)	4.96 (4.49–5.37)	4.86 (4.30–5.26)	4.96 (4.20–5.45)	0.670
HIV-RNA <50 cps/mL	711(82%)	520 (85%)	44 (70%)	111 (78%)	36 (73%)	0.004
HPV-16 genotype	237 (27%)	143 (23%)	16 (25%)	52 (37%)	26 (53%)	<0.0001
HPV-18 genotype	118 (14%)	62 (10%)	15 (24%)	28 (20%)	13 (27%)	0.0004
HPV-6/11 genotypes	96 (11%)	47 (8%)	12 (19%)	28 (20%)	9 (18%)	<0.0001
HPV-31 genotype	27 (3%)	13 (2%)	4 (6%)	5 (4%)	5 (10%)	<0.0001
HPV-33 genotype	61 (7%)	41 (7%)	7 (11%)	9 (6%)	4 (8%)	0.543
HPV-35 genotype	63 (7%)	41 (7%)	7 (11%)	10 (7%)	5 (10%)	0.410
HPV-39 genotype	40 (5%)	26 (4%)	8 (13%)	6 (4%)	0	0.021
HPV-45 genotype	38 (4%)	23 (4%)	4 (6%)	6 (4%)	5 (10%)	0.166
HPV-51 genotype	42 (5%)	24 (4%)	7 (11%)	7 (5%)	4 (8%)	0.062
HPV-52 genotype	37 (4%)	25 (4%)	7 (11%)	5 (4%)	0	0.055
HPV-56 genotype	30 (3%)	19 (3%)	3 (5%)	7 (5%)	1 (2%)	0.562
HPV-58 genotype	107 (12%)	75 (12%)	6 (10%)	18 (13%)	8 (16%)	0.512
HPV-59 genotype	34 (4%)	18 (3%)	6 (10%)	7 (5%)	3 (6%)	0.058
HPV-68 genotype	73 (8%)	55 (9%)	7 (11%)	8 (6%)	3 (6%)	0.686
HPV-73 genotype	48 (5%)	28 (5%)	6 (10%)	10 (7%)	4 (8%)	0.214


(A)
Cochran-Armitage test for trend: p<0.0001
% of subjects with ASC-US/LSIL/HSIL
50
40
30
20
10
0
23%
32%
38%
42%
HPV16 -
num HPV types<2
HPV16 -
num HPV types≥2
HPV16 +
num HPV types<2
HPV16 +
num HPV types≥2
(B)
Cochran-Armitage test for trend: p<0.0001
% of subjects with LSIL/HSIL
50
40
30
20
10
0
17%
20%
31%
35%
HPV16 -
num HPV types<2
HPV16 -
num HPV types≥2
HPV16 +
num HPV types<2
HPV16 +
num HPV types≥2

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EDITORIALS

WILEY Liver INTERNATIONAL

Hepatitis A Virus in men who have sex with men: Need for awareness and vaccination

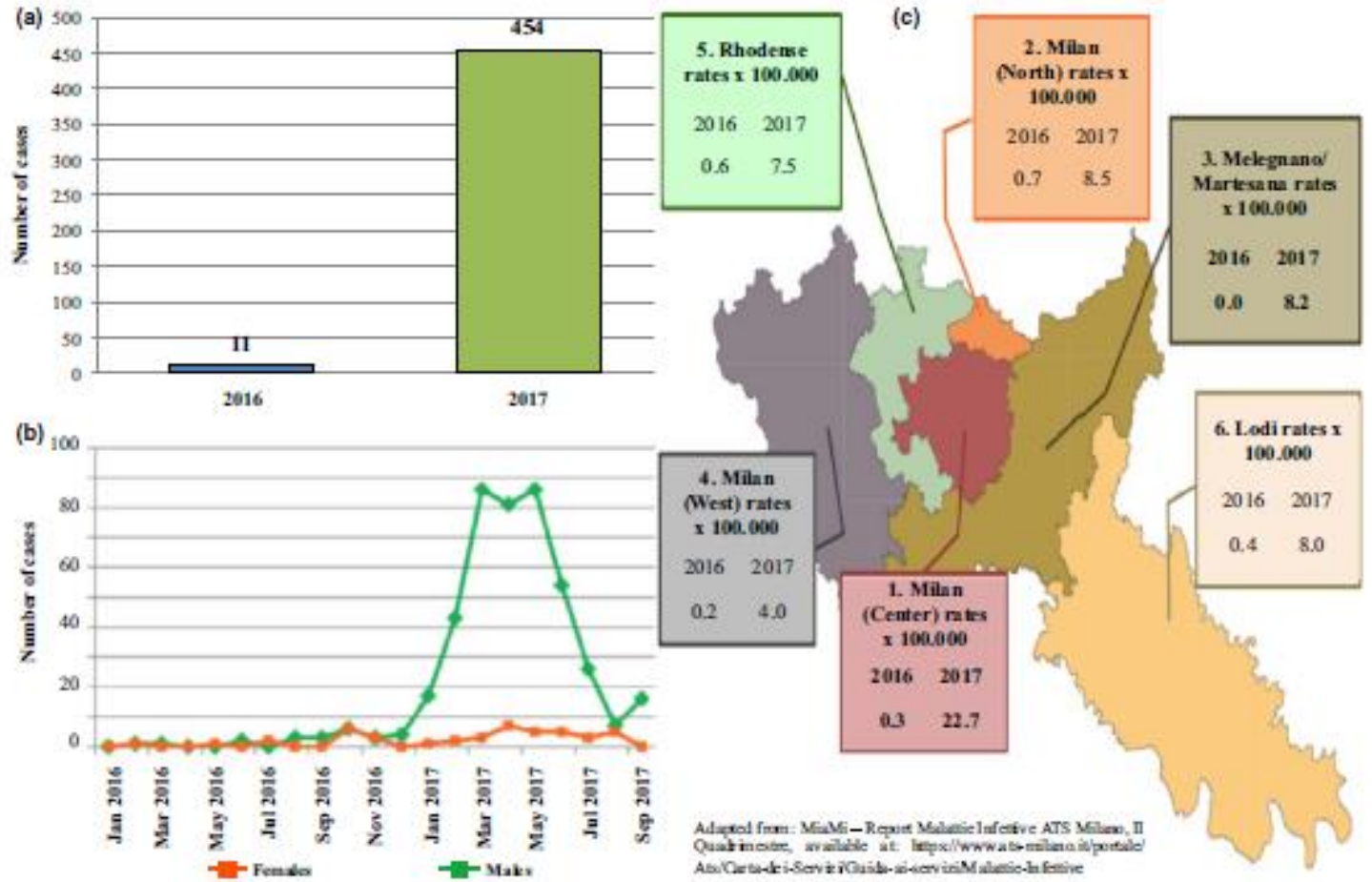
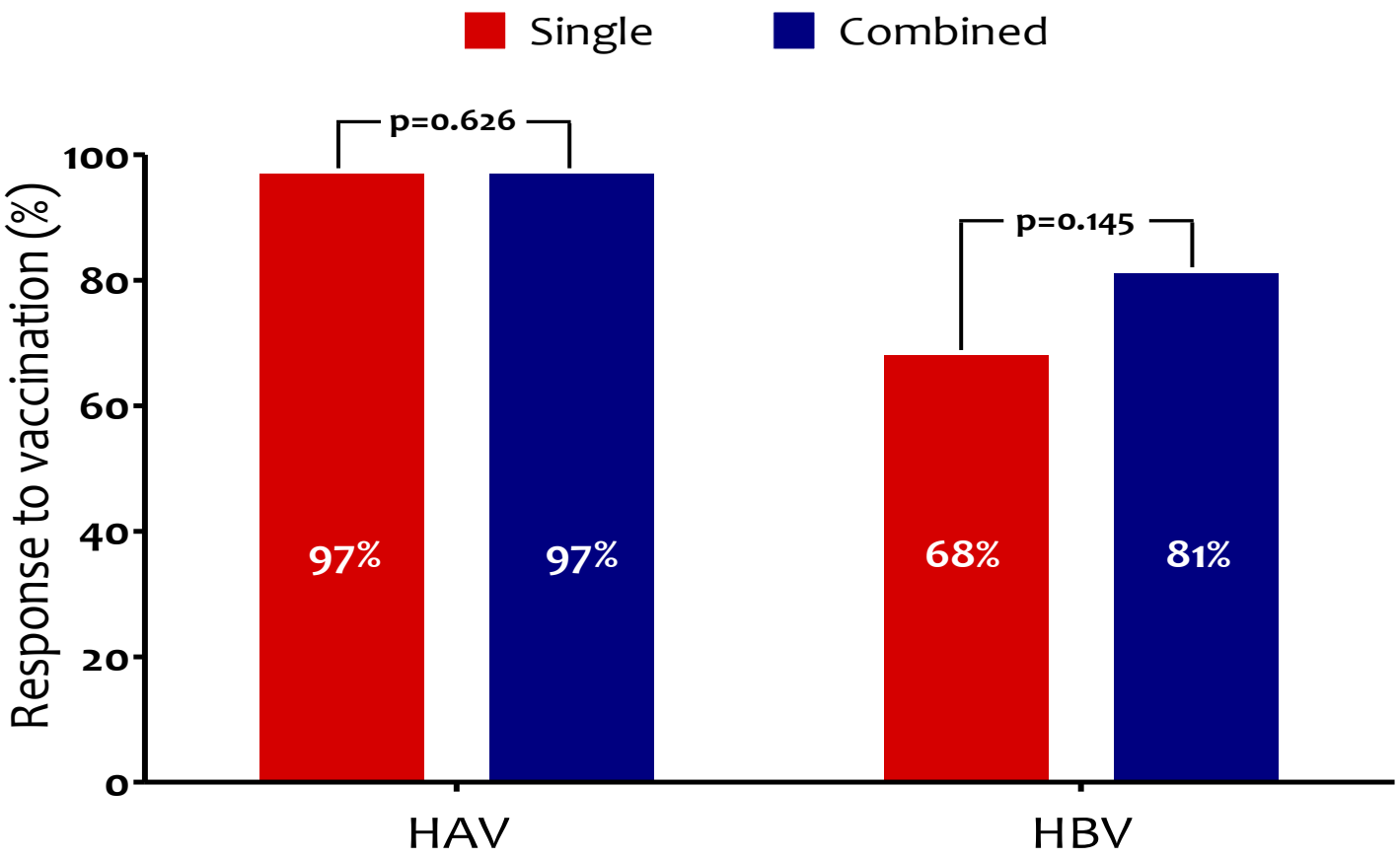
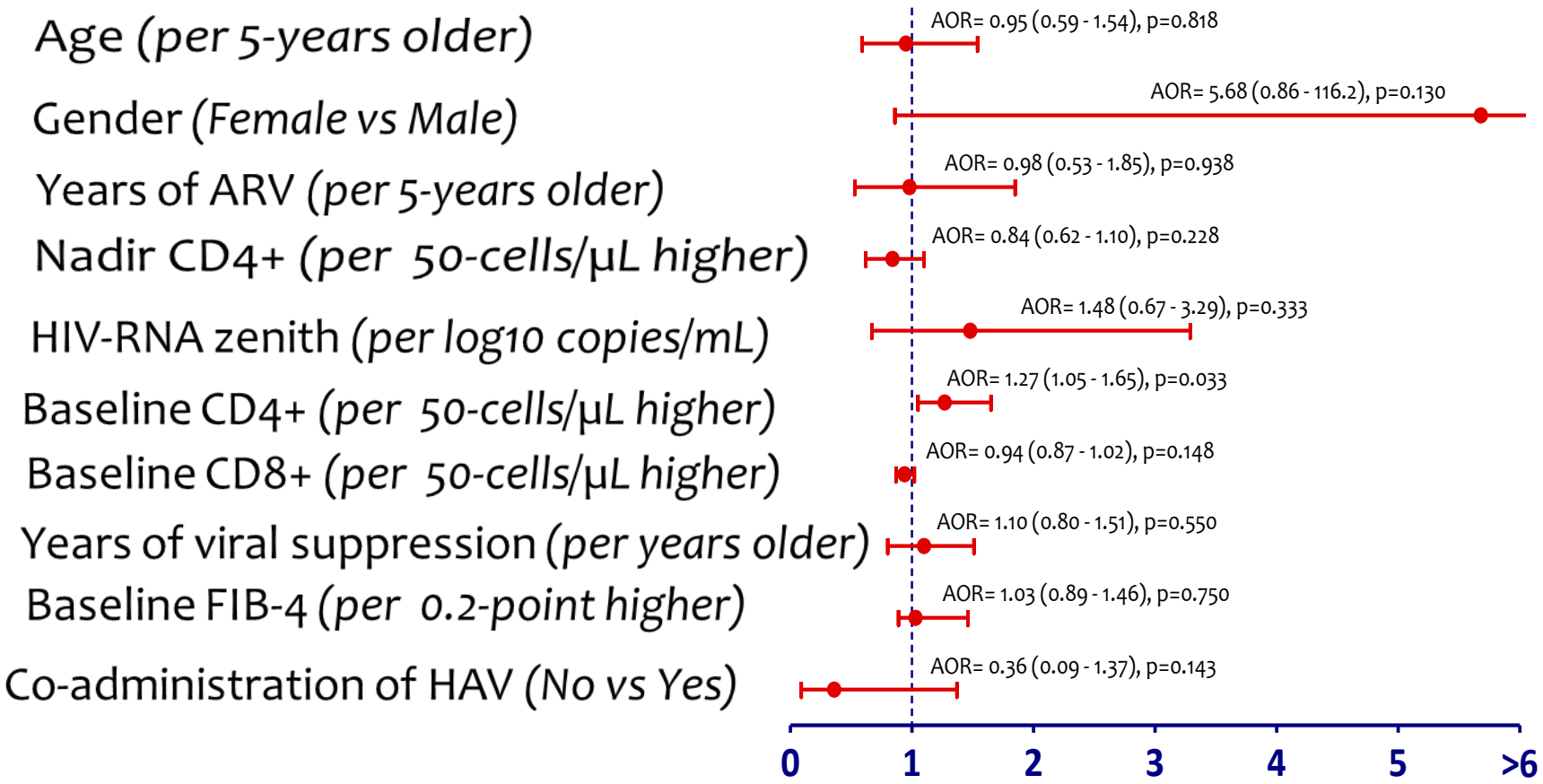


FIGURE 1 Epidemiology of recent acute hepatitis A outbreak in the Milan Metropolitan Area: total number of cases (A), gender and calendar stratification (B) and geographical distribution (C)

Risposta sierologica




Age (per 5-years older)
AOR= 0.95 (0.59 - 1.54), p=0.818
Gender (Female vs Male)
AOR= 5.68 (0.86 - 116.2), p=0.130
Years of ARV (per 5-years older)
AOR= 0.98 (0.53 - 1.85), p=0.938
Nadir CD4+ (per 50-cells/µL higher)
AOR= 0.84 (0.62 - 1.10), p=0.228
HIV-RNA zenith (per log10 copies/mL)
AOR= 1.48 (0.67 - 3.29), p=0.333
Baseline CD4+ (per 50-cells/µL higher)
AOR= 1.27 (1.05 - 1.65), p=0.033
Baseline CD8+ (per 50-cells/µL higher)
AOR= 0.94 (0.87 - 1.02), p=0.148
Years of viral suppression (per years older)
AOR= 1.10 (0.80 - 1.51), p=0.550
Baseline FIB-4 (per 0.2-point higher)
AOR= 1.03 (0.89 - 1.46), p=0.750
Co-administration of HAV (No vs Yes)
AOR= 0.36 (0.09 - 1.37), p=0.143
0
1
2
3
4
5
>6

10° CONGRESSO NAZIONALE
ICAR
Italian Conference on AIDS and Antiviral Research

Viral rebound after thirteen-valent pneumococcal vaccination in HIV-1 infected subjects on stable virological suppression

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Aim

To assess the immune-virological outcomes in HIV-1 infected ART-treated patients on stable virological suppression who underwent vaccination with PCV 13 over 6 months.

Material and methods

Retrospective analysis on a cohort study of:

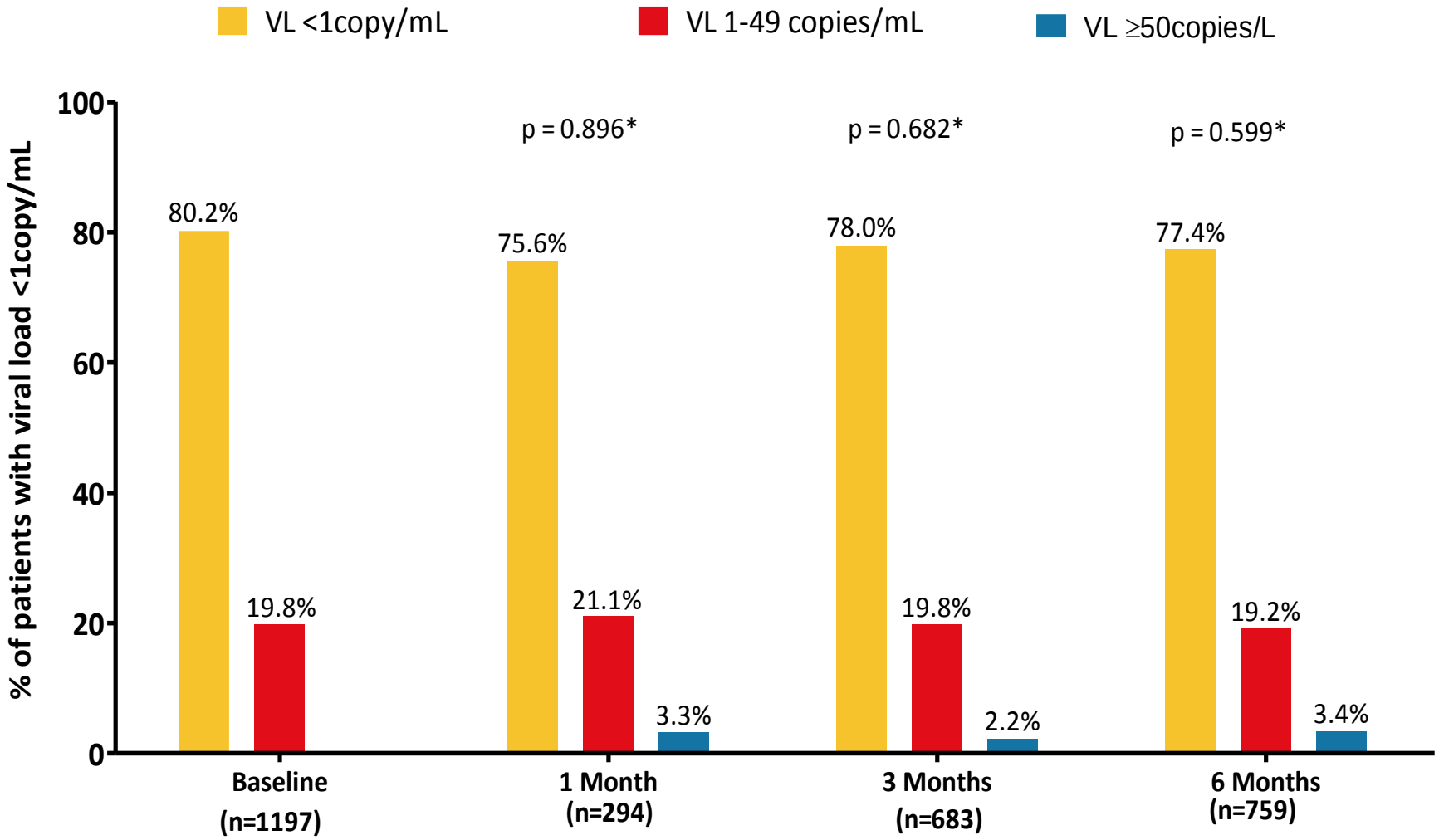
- ART-treated HIV-1 infected subjects;
- Age ≥18 years;
- Vaccinated at San Raffaele Hospital with PCV13 between September 2013 and August 2017;
- 3 consecutive determinations of HIV-RNA <50 copies/mL before vaccination (baseline, BL) and ≥2 viral load determinations after vaccination.

Follow-up accrued from BL until switch of BL HAART regimen, lost to follow-up or last visit up to 6 months.

Baseline characteristics at the time of vaccination with PCV13

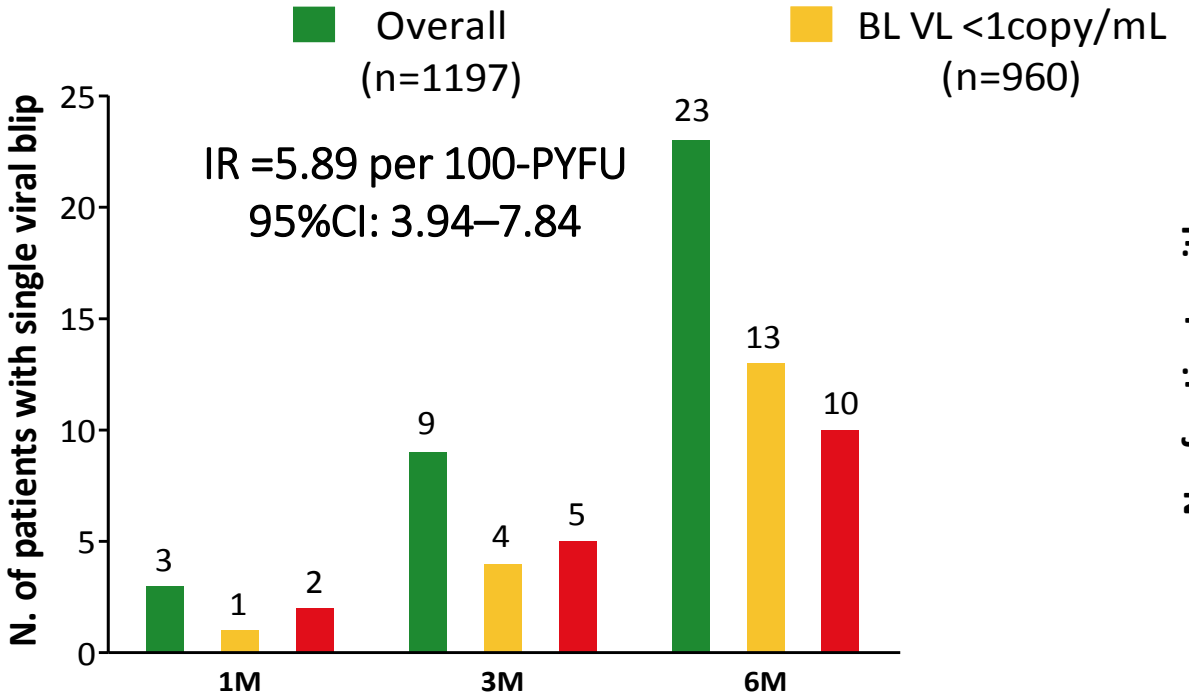
Characteristic	Overall (n=1197)	<1 copy/mL (n=960)	1-49 copies/mL (n=237)	P value
Age (years)	50.1 (44.0 – 55.3)	50.2 (44.2 – 56.0)	48.9 (42.7 – 54.0)	0.019
Male gender	1006 (84.0%)	793 (82.6%)	213 (89.9%)	0.0062
Years since HIV infection	15.0 (8.6 – 22-6)	15.7 (9.1 – 22.8)	13.0 (6.6 – 21.9)	0.005
Years on ART	12.1 (5.2 – 18.2)	12.7 (5.8 – 18.3)	9.1 (3.6 – 16.9)	0.0003
Nadir CD4 (cells/µL)	251 (144 – 360)	251 (148 – 355)	252 (126 – 374)	0.935
Years with HIV-RNA<50 copies/mL	4.7 (2.1 – 7.3)	5.0 (2.4 – 7.6)	3.0 (1.3 – 5.7)	<0.0001
CD4 (cells/µL)	705 (532 – 916)	701 (532 – 910)	723 (536 – 934)	0.555
CD8 (cells/µL)	878 (660 – 1128)	865 (645 – 1125)	914 (694 – 1138)	0.373
CD4/CD8 ratio	0.82 (0.58 – 1.13)	0.83 (0.58 – 1.14)	0.79 (0.57 - 1.07)	0.326
CD4/CD8 ratio >1	296 (33.2%)	243 (34%)	53 (29%)	0.217

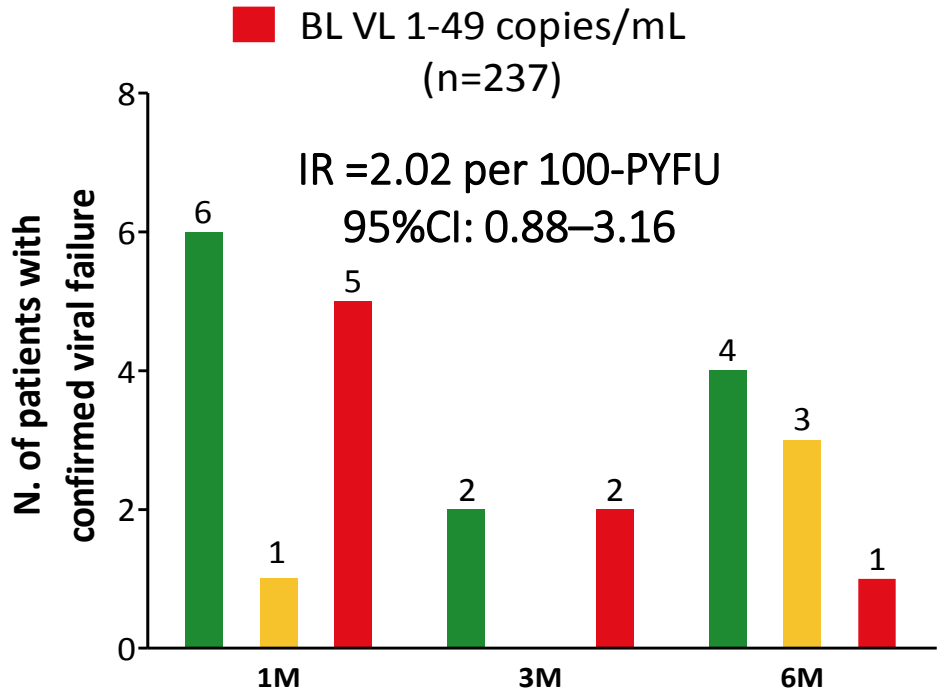
Viral load distribution during follow-up



* McNemar test; categories 1-49 copies/mL and ≥50 copies/mL were grouped to p'erform the comparison vs baseline.

Virological outcomes





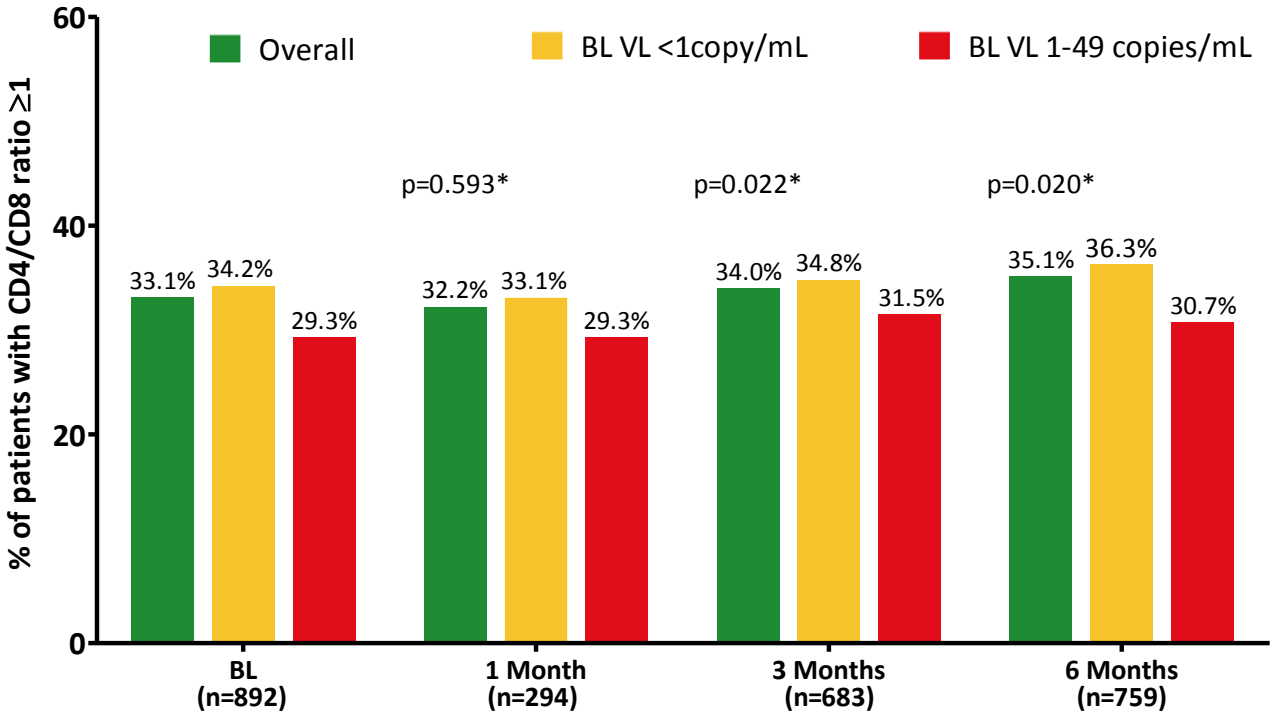
18 VB (1.9%) in the undetectable viremia group vs 17 (7%) in the residual viremia group (p<0.0001).

4 CVF (0.4%) in the undetectable viremia group vs 8 (3.4%) in the residual viremia group (p<0.0001)

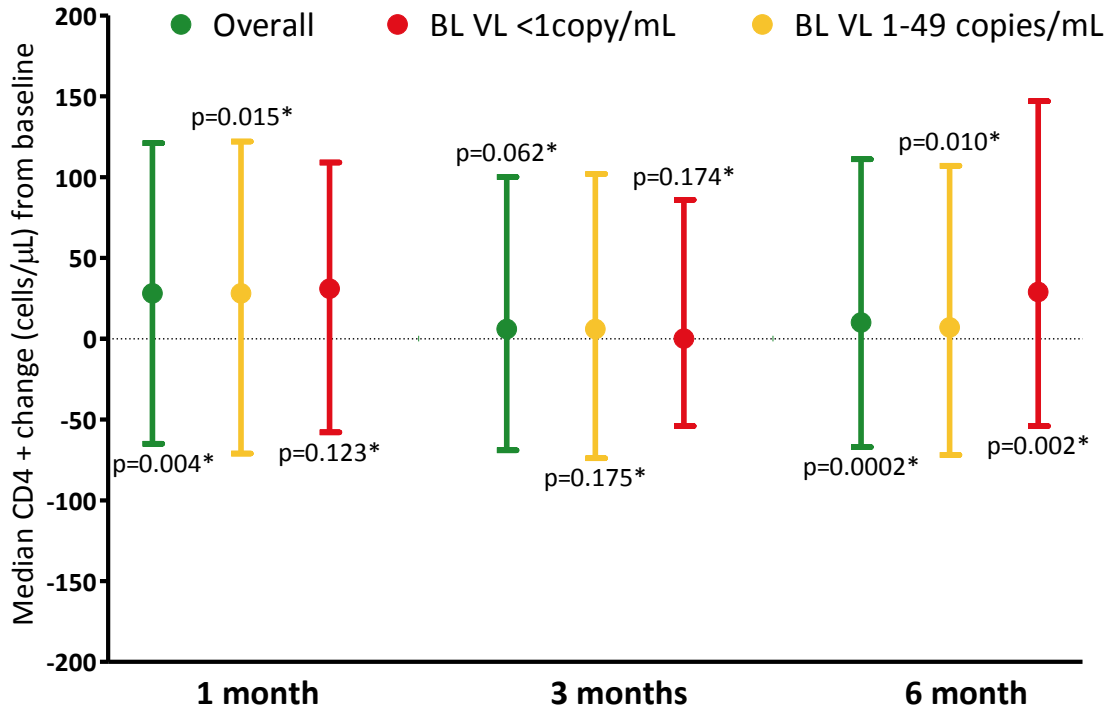
Viral blips (n=35; 2.9%)	
1 month (n=3)	1 with low ART adherence.
3 months (n=9)	1 with low ART adherence and 2 with influenza.
6 months (n=23)	5 with low ART adherence, 4 with influenza, 1 with pelvic infection, 2 concomitant malignancies and 1 with syphilis.

Confirmed viral failures (N=12; 1%)	
1 month (n=6)	3 with low ART adherence and 1 with influenza.
3 months (n=2)	1 with low ART adherence.
6 months (n=4)	1 with low ART adherence.

Immunological outcomes



* McNemar test vs baseline in the overall sample



* Wilcoxon signed-rank test.

No significant changes in CD8 count from BL were observed.

Conclusions

- Viral blips and confirmed virological failures were rarely observed in patients on stable virological suppression in the first 6 months following vaccination with PCV13 and frequently associated with lack of adherence or occurrence of concomitant clinical events.

- No decrease of CD4 and CD4/CD8 ratio was recorded in the short term and an amelioration was observed over the 6 months following vaccination.

- Future studies assessing the reduction of pneumonia events are ongoing.

Please, vaccinate your patients!