Cardiovascular Risk in Advanced Naïve HIV-Infected Patients Starting Antiretroviral Therapy: Comparison of Three Different Regimens - PREVALEAT II Cohort.

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Clinica Malattie Infettive

MORTALITA’

MORTALITA’

HAART

COMORBIDITA’

COMORBIDITA’

CARDIOVASCOLARE


ATTIVAZIONE ENDOTELIALE
IMMUNO RICOSTITUZIONE
INFIAMMAZIONE CRONICA
RISCHIO CARDIO VASCOLARE

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Ematochimici

Demografici

PARAMETRI

Markers d'infiammazione endoteliale

Doppler carotideo

FMD


EFAVIRENZ
ATAZANAVIR/r
EMTRICITABINA/TENOFOVIR
DARUNAVIR/r

Table 1

Baseline characteristics of 119 patients: treatment groups and overall population (1/2)

	EFV N=31		ATV N=49		DRV N=39		Total N=119		P
Age (Median-InterQuartile Range)	48	35-55	46	41-50	50	43-57	46	36-51	0.46
	N	%	N	%	N	%	N	%	
Males	25	80.6	35	71.4	33	84.6	93	78.2	0.30
Caucasian	25	80.6	43	87.8	36	92.3	104	87.4	0.34
RF for HIV acquisition									
IDU	4	12.9	7	14.3	6	15.4	17	14.3	
Sexual	24	77.4	41	83.7	29	74.4	94	79.0	0.55
Current alcohol consumption	5	16.1	6	12.2	6	15.4	17	14.3	0.86
Current smoker	10	32.3	17	34.7	14	35.9	41	34.5	0.90
BMI≥25.0	7	22.6	12	24.5	16	41.0	35	29.4	0.15
Family history of CVD	1	3.2	1	2.0	1	2.6	3	2.5	0.99
AIDS at presentation	8	25.8	11	22.4	8	20.5	27	22.7	0.87

Table 1

Baseline characteristics of 119 patients: treatment groups and overall population (2/2)

	EFV N=31		ATV N=49		DRV N=39		Total N=119		P
CD4+ cell/mm^3 ≥200	0	100	0	100	0	100	0	100	1.0
HIVRNA<25 cp/mm^3	0	100	0	100	0	100	0	100	1.0
Pathologic FMD	13	41.9	22	44.9	26	66.7	61	51.3	0.13
IMT and/or plaques	14	45.2	24	49.0	16	41.0	54	45.4	0.76
total cholesterol >200 mg/dL	6	19.4	7	14.3	6	15.4	19	16.0	0.83
HDL < 40 mg/dL	22	71.0	37	75.5	29	74.4	88	73.9	0.90
triglycerides > 200 mg/dL	6	19.4	15	30.6	4	10.3	25	21.0	0.07
LDL > 160 mg/dL	0	0.0	2	4.1	1	2.6	3	2.5	0.53
glycemia > 100 mg/dL	7	22.6	5	10.2	6	15.4	18	15.1	0.32
Pathologic D-dimer >500	14	45.2	25	51.0	21	53.8	60	50.4	0.85
Pathologic hsCRP >300	5	16.1	19	38.8	15	38.5	39	32.8	0.08

Table 2

Metabolic and cardiovascular changes during follow-up: overall population

	T1		T2		T3	
	N	%	N	%	N	%
BMI≥25.0	35	29.4	43	36.1	48	40.3
Pathologic FMD	62	52.1	69	58.0	59	49.6
IMT and/or plaques	41	34.5	44	37.0	46	38.7
Total cholesterol >200 mg/dL	32	26.9	37	31.1	40	33.6
HDL < 40 mg/dL	63	52.9	63	52.9	57	47.9
triglycerides > 200 mg/dL	25	21.0	32	26.9	29	24.4
LDL > 160 mg/dL	9	7.6	12	10.1	6	5.0
Glycemia > 100 mg/dL	17	14.3	9	7.6	11	9.2
CD4+ cell/mm^3 ≥200	52	43.7	64	53.4	77	64.7
HIVRNA<25 cp/mm^3	36	30.2	64	53.8	77	64.7
Pathologic D-dimer	27	22.7	14	11.8	15	12.6
Pathologic hsCRP	15	12.6	16	13.4	12	10.1

Tables 3 – 4 – 5

Metabolic and cardiovascular changes at T1 - T2 - T3, by treatment group

	EFV N=31		ATV N=49		DRV N=39		P
	N	%	N	%	N	%	
BMI≥25.0	8	30.8	15	31.9	20	57.1	0.04
Pathologic FMD	14	73.7	25	73.5	23	76.7	0.95
IMT and/or plaques	6	30.0	21	50.0	14	50.0	0.28
Total cholesterol >200 mg/dL	6	23.1	14	29.8	12	34.3	0.64
HDL < 40 mg/dL	13	50.0	28	59.6	22	62.9	0.58
Triglycerides > 200 mg/dL	4	15.4	12	25.5	9	26.5	0.54
LDL > 160 mg/dL	3	12.0	3	7.0	3	9.4	0.78
Glycemia > 100 mg/dL	4	15.4	10	21.3	3	8.6	0.29
CD4+ cell/mm³ ≥200	11	42.3	23	48.9	18	51.4	0.77
HIVRNA<25 cp/mm³	9	34.6	12	26.1	15	42.9	0.28
Pathologic D-dimer	5	26.3	13	40.6	9	33.3	0.57
Pathologic hsCRP	2	10.5	6	18.7	7	25.9	0.42

	EFV N=31		ATV N=49		DRV N=39		P
	N	%	N	%	N	%	
BMI≥25.0	10	32.3	16	32.7	22	56.4	0.03
Pathologic FMD	18	81.8	28	77.8	23	71.9	0.68
IMT and/or plaques	9	33.3	19	41.3	16	45.7	0.61
Total cholesterol >200 mg/dL	9	32.1	13	28.9	15	42.9	0.41
HDL < 40 mg/dL	15	55.6	31	70.4	17	50.0	0.16
Triglycerides > 200 mg/dL	9	32.1	12	26.7	11	31.4	0.85
LDL > 160 mg/dL	2	7.1	5	11.1	5	14.3	0.67
Glycemia > 100 mg/dL	3	10.7	3	6.7	3	8.6	0.83
CD4+ cell/mm³ ≥200	14	50.0	30	68.2	20	60.6	0.30
HIVRNA<25 cp/mm³	19	67.9	25	58.1	20	57.1	0.64
Pathologic D-dimer	5	23.8	7	21.2	2	8.7	0.26
Pathologic hsCRP	8	38.1	3	9.1	5	21.7	0.04

	EFV N=31		ATV N=49		DRV N=39		P
	N	%	N	%	N	%	
BMI≥25.0	8	30.8	14	35.0	24	70.6	0.002
Pathologic FMD	16	80.0	22	68.8	21	67.7	0.60
IMT and/or plaques	10	40.0	19	48.7	17	51.5	0.67
Total cholesterol >200 mg/dL	12	46.2	11	27.5	17	50.0	0.11
HDL < 40 mg/dL	13	50.0	24	60.0	20	58.8	0.70
Triglycerides > 200 mg/dL	8	30.8	11	27.5	10	29.4	0.96
LDL > 160 mg/dL	2	8.0	1	2.8	3	9.7	0.49
Glycemia > 100 mg/dL	2	7.7	4	10.0	5	14.7	0.67
CD4+ cell/mm³ ≥200	23	88.5	30	75.0	24	70.6	0.25
HIVRNA<25 cp/mm³	23	88.5	30	75.0	24	70.6	0.30
Pathologic D-dimer	3	14.3	9	29.0	3	11.5	0.20
Pathologic hsCRP	5	23.8	4	12.9	3	11.5	0.45

Figure 1

Percentage of patients with normal value of blood biomarkers: overall population

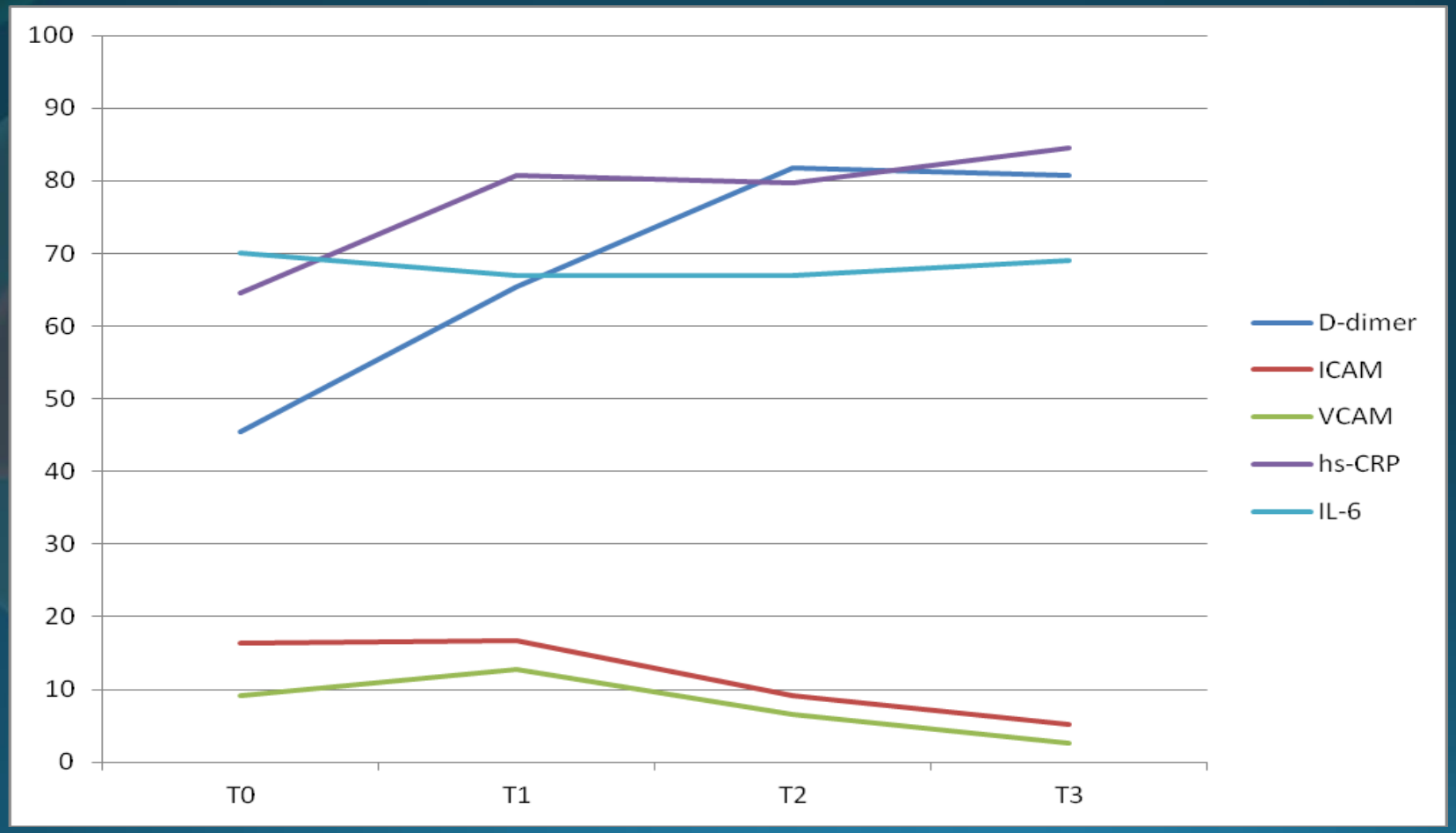
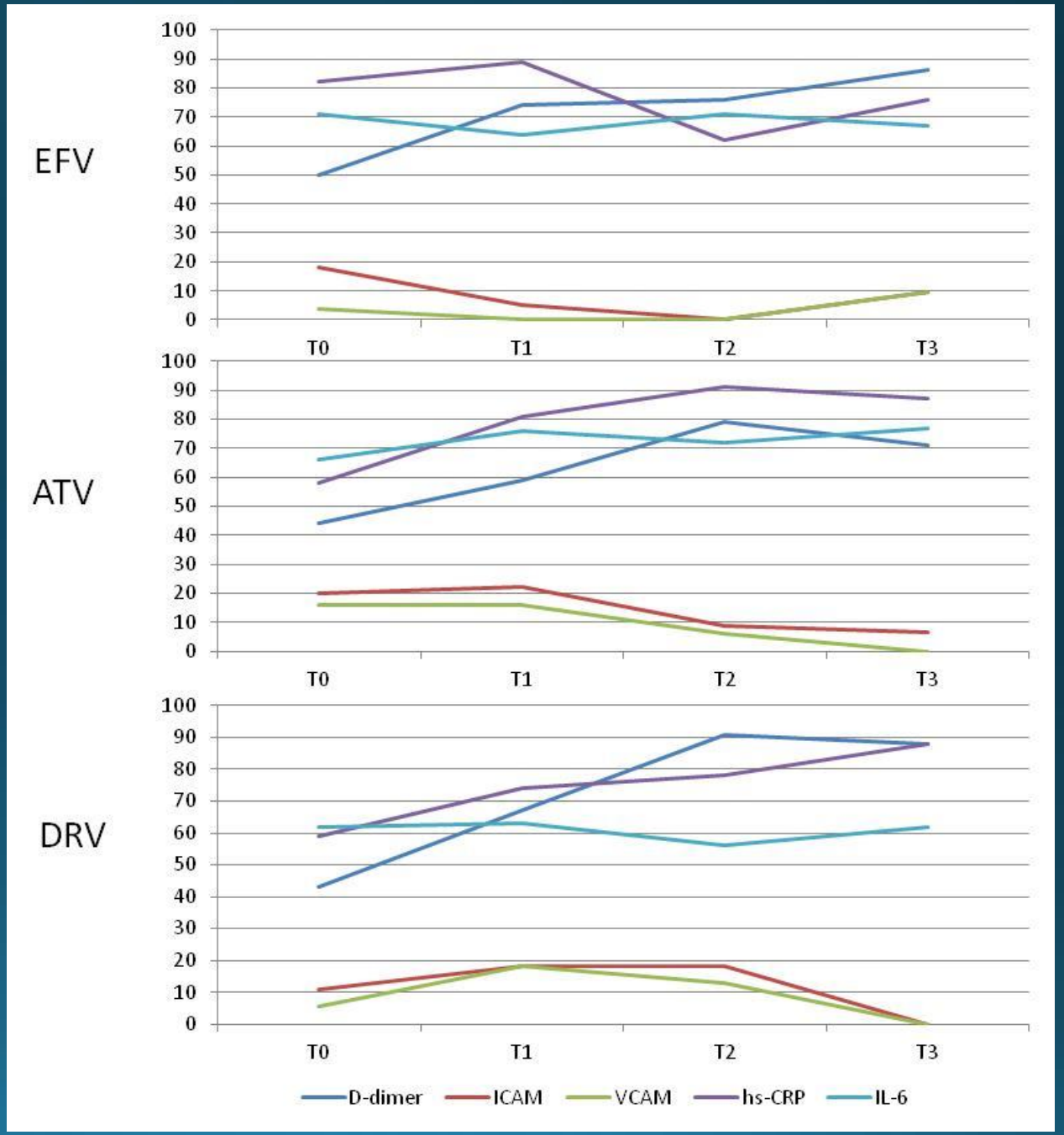


Figure 2

Percentage of patients with normal value of blood biomarkers, by treatment group



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Risk of cardiovascular disease events with atazanavir-based antiretroviral treatment regimens among HIV-infected veterans, a US national study

Joanne LaFleur[1]; Adam Bress[2]; Lisa Rosenblatt[3]; Jacob Crook[4]; Paul Sax[5]; Joel Myers[6] and Corey Ritchings[6]

Abstract P175 Table 1. Risk of CVD events with ATV versus non-ATV-based regimens

Outcome	ATV crude incidence (per 1000 patient-years)	ATV vs. other PIs: HR (95% CI)	ATV vs. NNRTIs: HR (95% CI)	ATV vs. INSTIs: HR (95% CI)
MI	5.16	0.46(0.26 0.81)*	0.72 (0.48 1.09)	0.71 (0.31 1.61)
Overal stroke	18.31	0.89 (0.66 1.22)	1.01 (0.81 1.27)	0.71 (0.47 1.07)
Ischemic stroke	17.65	0.90(0.66 1.25)	1.03 (0.81 1.29)	0.74 (0.48 1.12)
Haemorrhagic stroke	0.64	0.50(0.18 1.42)	0.50 (0.16 1.52)	0.18 (0.02 1.36)
MI/stroke	23.04	0.80(0.61 1.05)	0.94 (0.77 1.15)	0.69 (0.47 1.00)*
MI/stroke/death	38.83	0.90(0.73 1.12)	0.98 (0.84 1.15)	0.81 (0.60 1.10)
All-cause death*	16.02	1.01 (0.73 1.39)	0.91 (0.72 1.15)	1.11 (0.66 1.90)
*p <0.05.				
†Based on VA vital status files.				

Condusions: In the VHA, ATV-based regimens were generally associated with a lower risk for CVD events compared to other antiretrovirals. Further research to elucidate the mechanism for a potential reduced risk of CVD events with atazanavir is warranted.

INFLAMMATION AND AGE-RELATED COMPLICATIONS

ASSOCIATION BETWEEN CARDIOVASCULAR DISEASE & CONTEMPORARILY USED PROTEASE INHIBITORS

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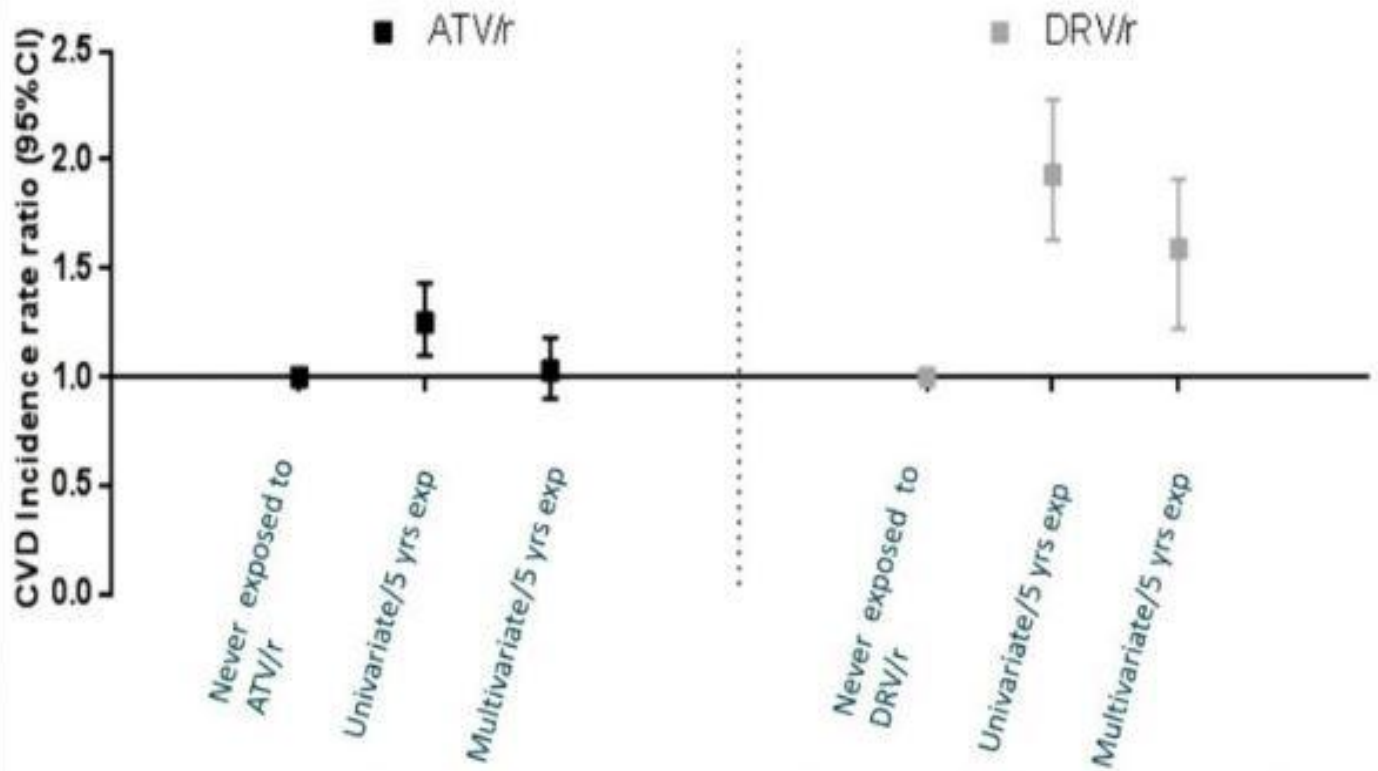
Association Between CVD & Cumulative ATV/r and DRV/r Use

Primary Model; Baseline Adjustment Only for Variables Potentially on the Causal Pathway between PI/r Use and CVD



Multivariate models were adjusted for gender, age, race, HIV risk of aquisition, enrollement cohort, baseline date, prior CVD, CD4 nadir, CD4, BMI, diabetes, dyslipidamia, eGFR (all fixed at baseline), cumulative exposure to DRV/r, ATV/r, LPV/r and IDV, recent exposure ABC, prior AIDS, viral load, hepatitis B & C, family history of CVD, hypertension, smoking (all time updated)

Conclusioni

L'infiammazione cronica è il principale determinante del rischio cardio vascolare legato al deficit immunitario

Il rischio cardiovascolare è più alto nel primo anno e si può ipotizzare che con la stabilizzazione dell'infiammazione potrebbe diminuire

Quindi avviare la ARV al più presto potrebbe servire a ridurre l'infiammazione

Sarebbe utile un Follow Up più lungo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