



- HPV is a very common virus that affects 50-80% of women in their lifetime.
- More than 90% of HPV infections heal spontaneously within 2 years.

## “Efficacy of HPV vaccine is 98-100%” – Misleading claim

		N	n	Efficacy (96.1% CI)
CIN2+	Vaccine	7,344	1	98.1% (88.4 to 100)
	Placebo	7,312	53	
CIN3+	Vaccine	7,344	0	100% (36.4 to 100)
	Placebo	7,312	8	

Paavonen J et al. Lancet 2009; 374(9686):301–314.

CIN2<sup>+</sup> of Vaccine Group: 1/7,300

CIN2<sup>+</sup> of Placebo Group: 53/7,300

The ratio of CIN2<sup>+</sup> in Vaccine Group and Placebo Group is 1/7,300 vs 53/7,300

i.e. 52/53 escaped becoming CIN2<sup>+</sup> ⇒  $52/53 = 98\%$  (Relative Risk Reduction)

**“Efficacy of HPV vaccine is 98-100%”**

This expression, however, may give laypeople the false idea that almost all Cervical cancer can be prevented by the HPV vaccine.

# Real benefit for vaccinated girls

## Risk becoming CIS2<sup>+</sup>

Risk in Placebo Group (No Vaccine) : 53/7300

Risk in Vaccinated Group (HPV-vaccine): 1/7300

**Absolute Risk Reduction =  $53/7300 - 1/7300 = 0.007$**

In reality, the benefit from vaccination is just 0.7% reduction in the risk of becoming CIS2<sup>+</sup>, which is not worth the risk of serious adverse effects.

# Real risk & benefit balance for vaccinated girls

- **Absolute Risk Reduction caused by vaccination**
- **Serious Adverse Effect caused by vaccination**

