



European Federation for Colposcopy

Margin status as predictor of treatment failure

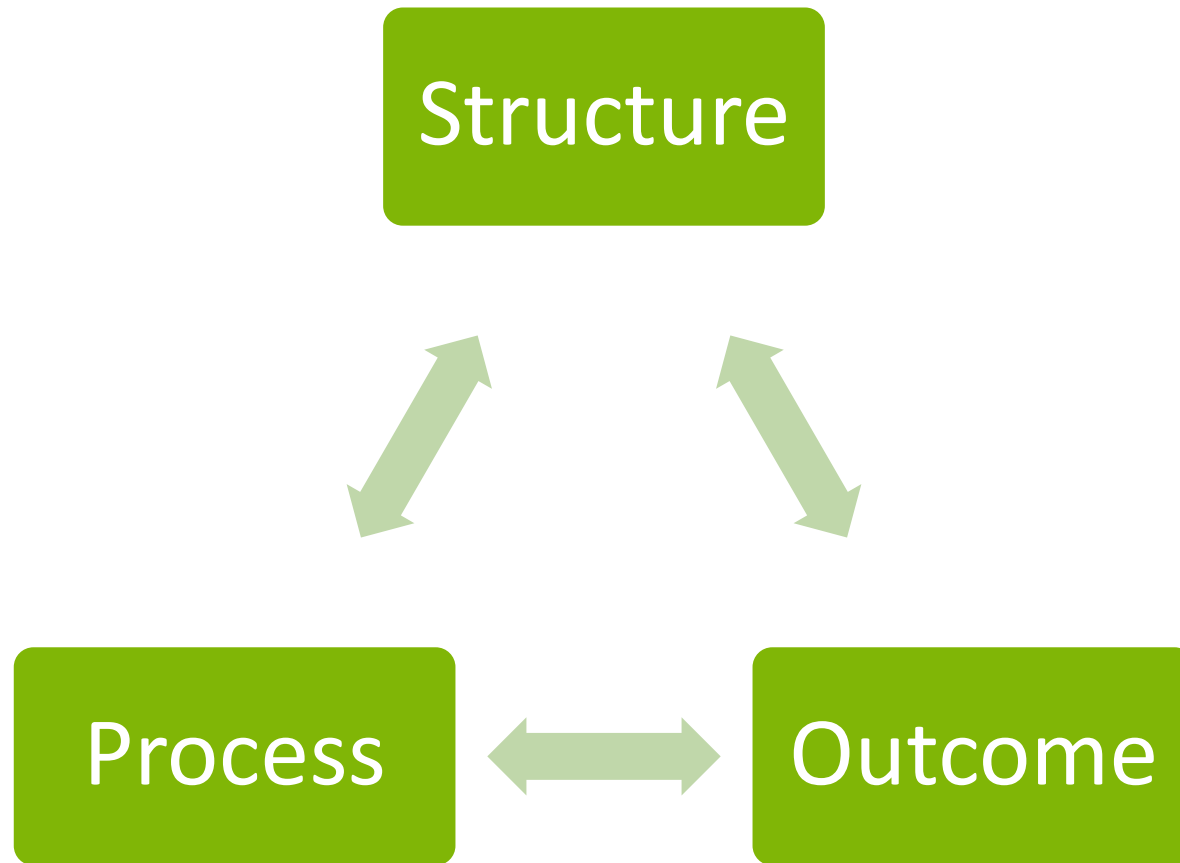
CWE Redman

What is Quality Assurance?



Systematic monitoring and evaluation of the various aspects of a service to ensure that standards of quality are being met

What Standards?



Excisional Treatment



Pros of excision:

- confirms diagnosis
- excludes invasion
- assessment of margins

Treatment failure 4-18%

Arbyn 2012;30 Suppl 5:F88-99





Derivation of Standards

European Journal of Obstetrics & Gynecology and Reproductive Biology 170 (2013) 255–258



Contents lists available at [SciVerse ScienceDirect](#)

European Journal of Obstetrics & Gynecology and
Reproductive Biology

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



European Federation of Colposcopy quality standards Delphi consultation



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EFC standards 2013



Identified targets

Target

Colposcopic examination prior to treatment

100%

Documentation of SCJ status

100%

% CIN2+ in excisional treatment biopsies

85%

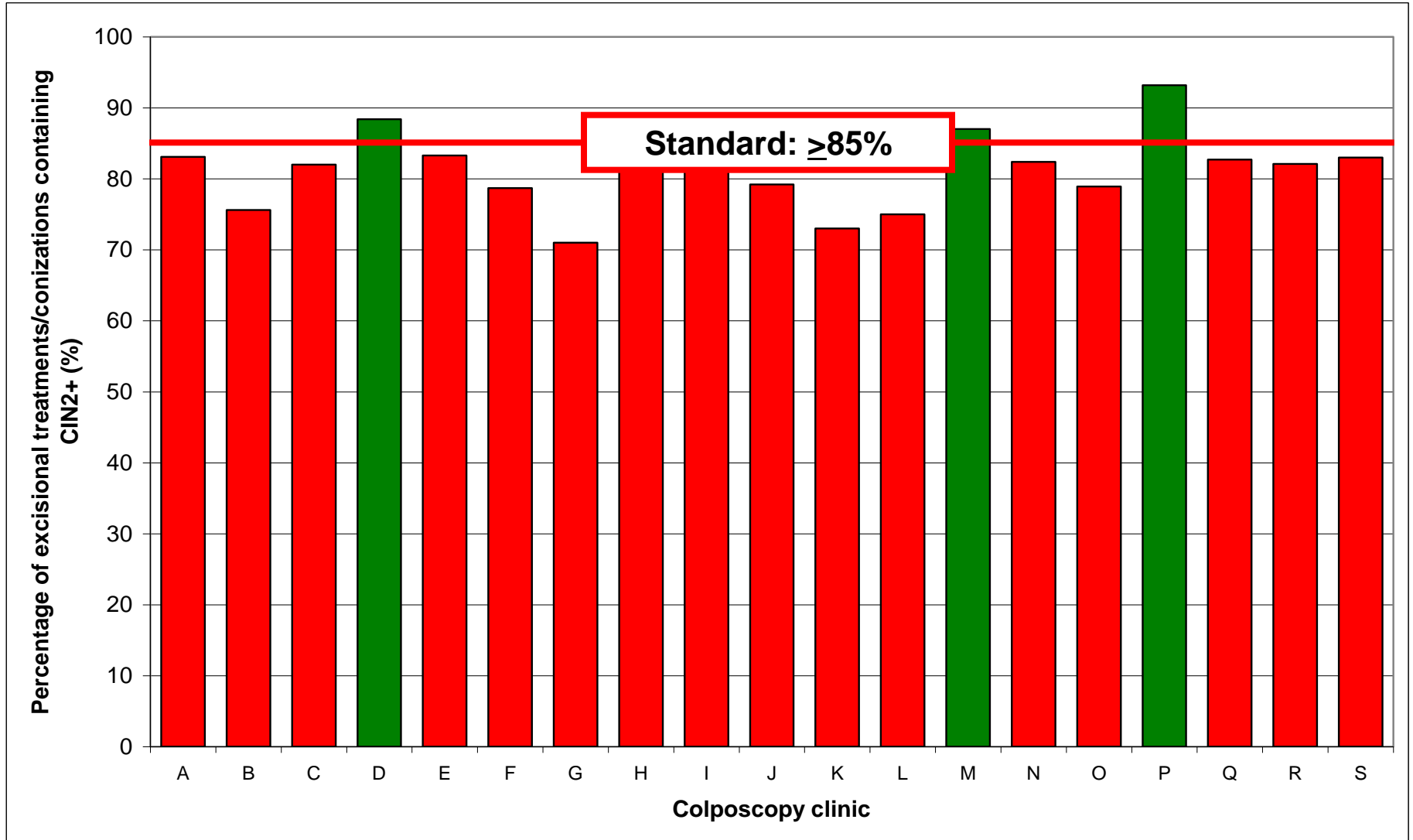


% clear margins in excisional treatment biopsies

80%



% excisions containing CIN2+



EFC standards 2012



Identified targets

Target

Colposcopic examination prior to treatment

100%

Documentation of SCJ status

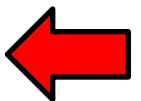
100%

% CIN2+ in excisional treatment biopsies

85%

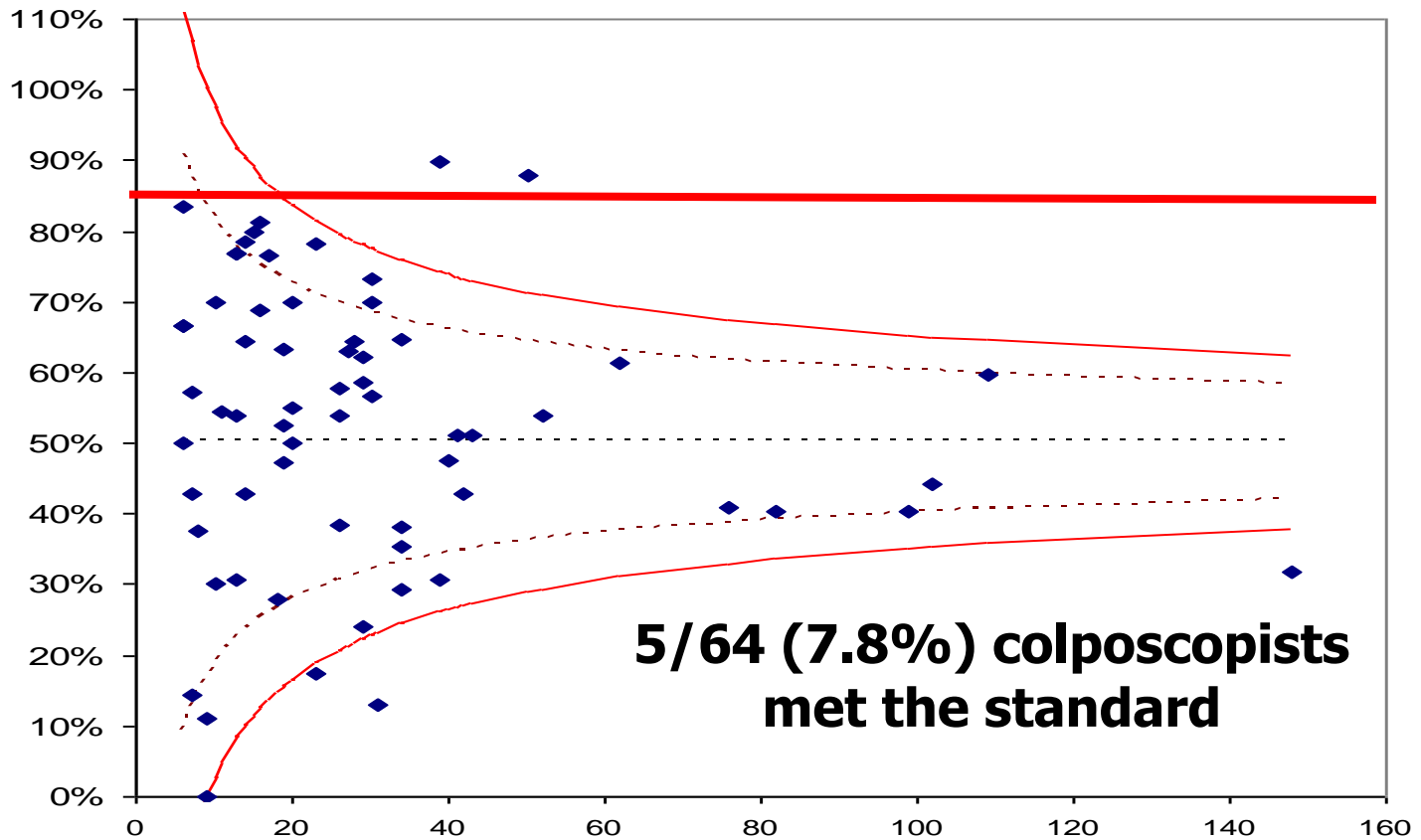
% clear margins in excisional treatment biopsies

80%





% of excisions with clear margins



Number of excisional treatments/conizations with histological confirmation of CIN or worse and margins assessed

EFC Standards - comments



CIN2+ in Excisions

Margins

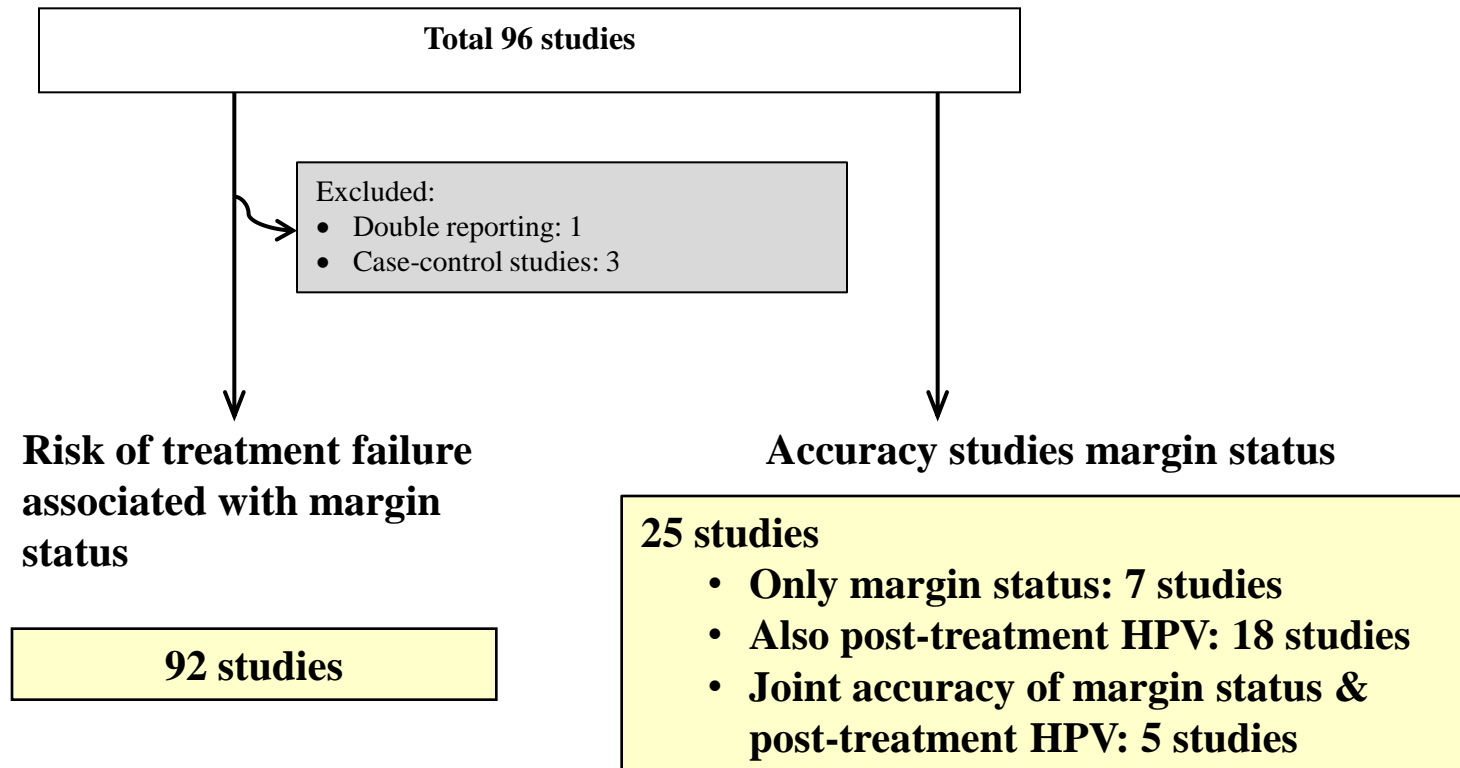
• Reliable	√	√
• Relevant	√	?
• Valid	√	??

Further work needed

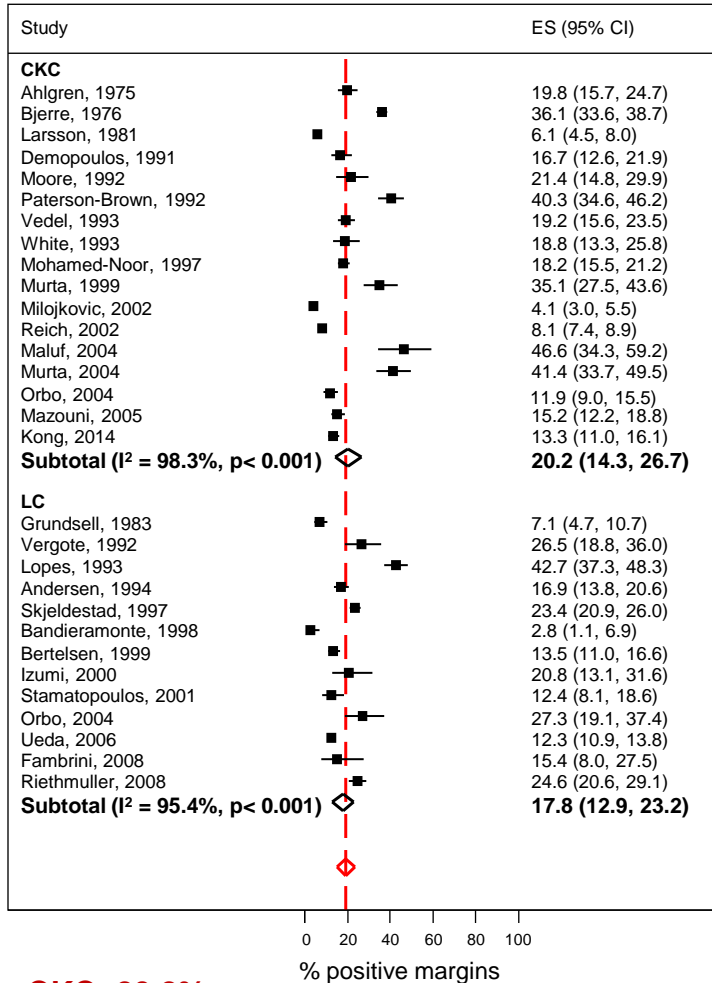
Meta-analysis: margins & treatment failure



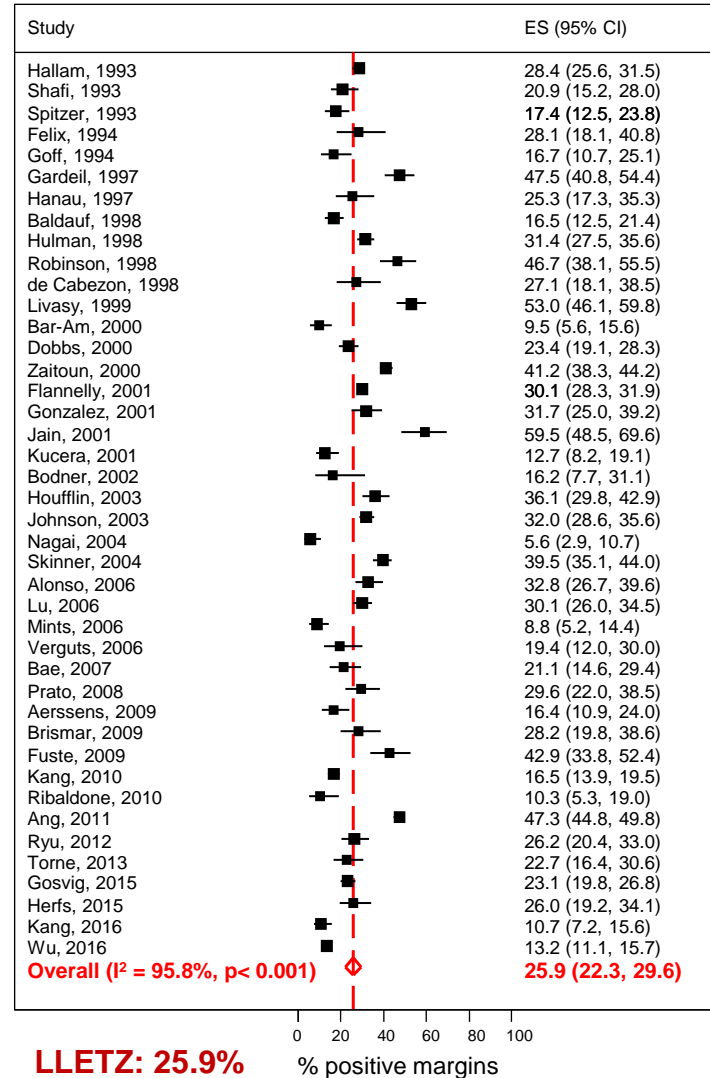
1. **Meta-analysis Ghaem-Maghani, 2007 [residual CIN2+ ~ margins]: 65 studies**
2. **Meta-analyses Arbyn, Vaccine2006/12 & update [post-treatment HPV]: 15 studies**
3. **New searches (2006-16): 16 studies**



Proportion of involved margins (%)

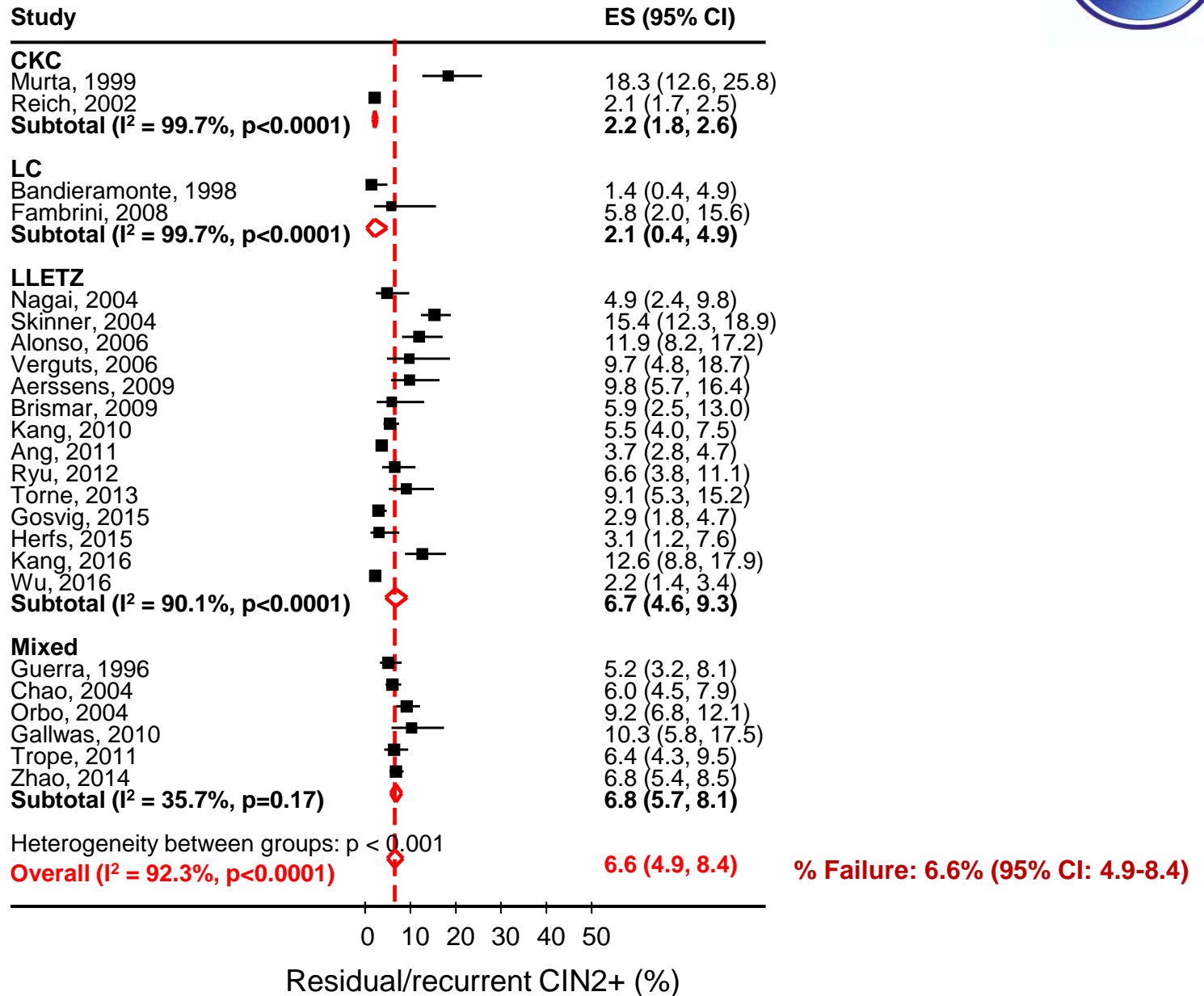


CKC: 20.2%
LC: 17.8%



LLETZ: 25.9%

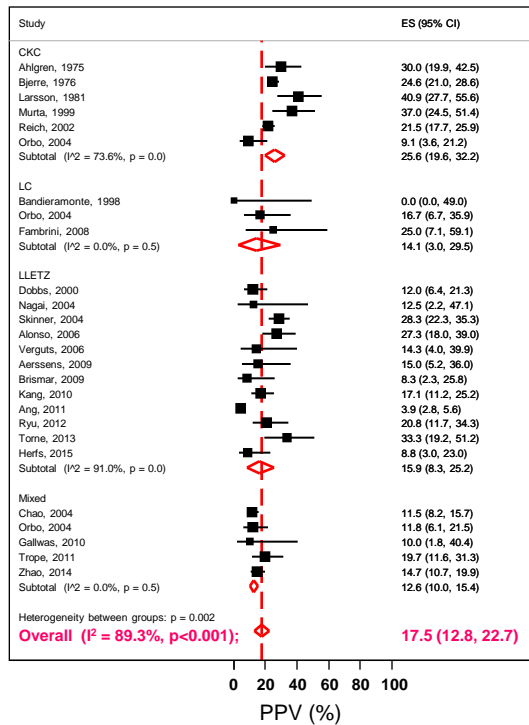
Occurrence of residual/recurrent CIN2+ (=treatment failure)





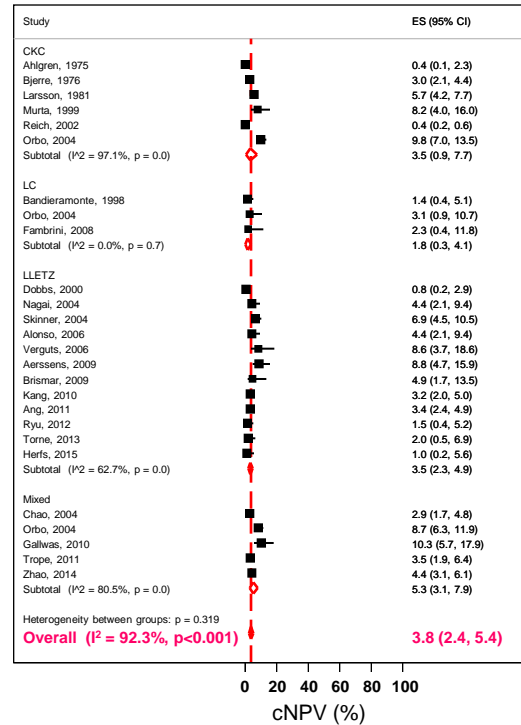
Risk CIN2+ ~ margin status

Margin+



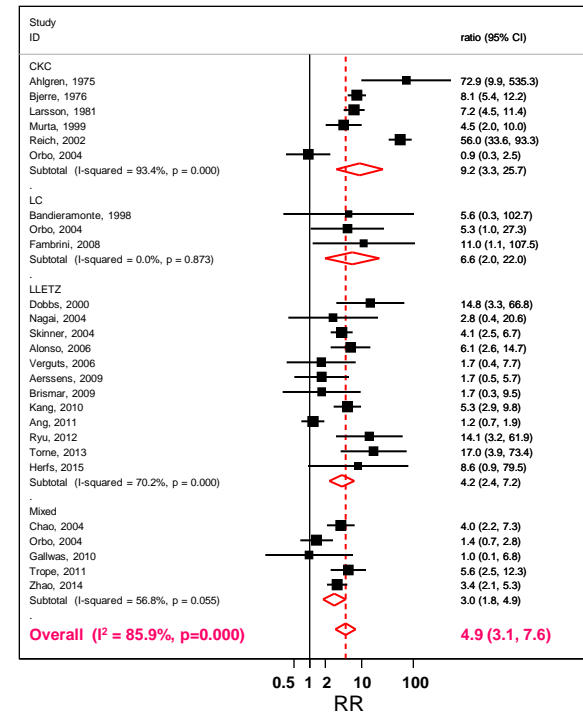
17.5%

Margin-



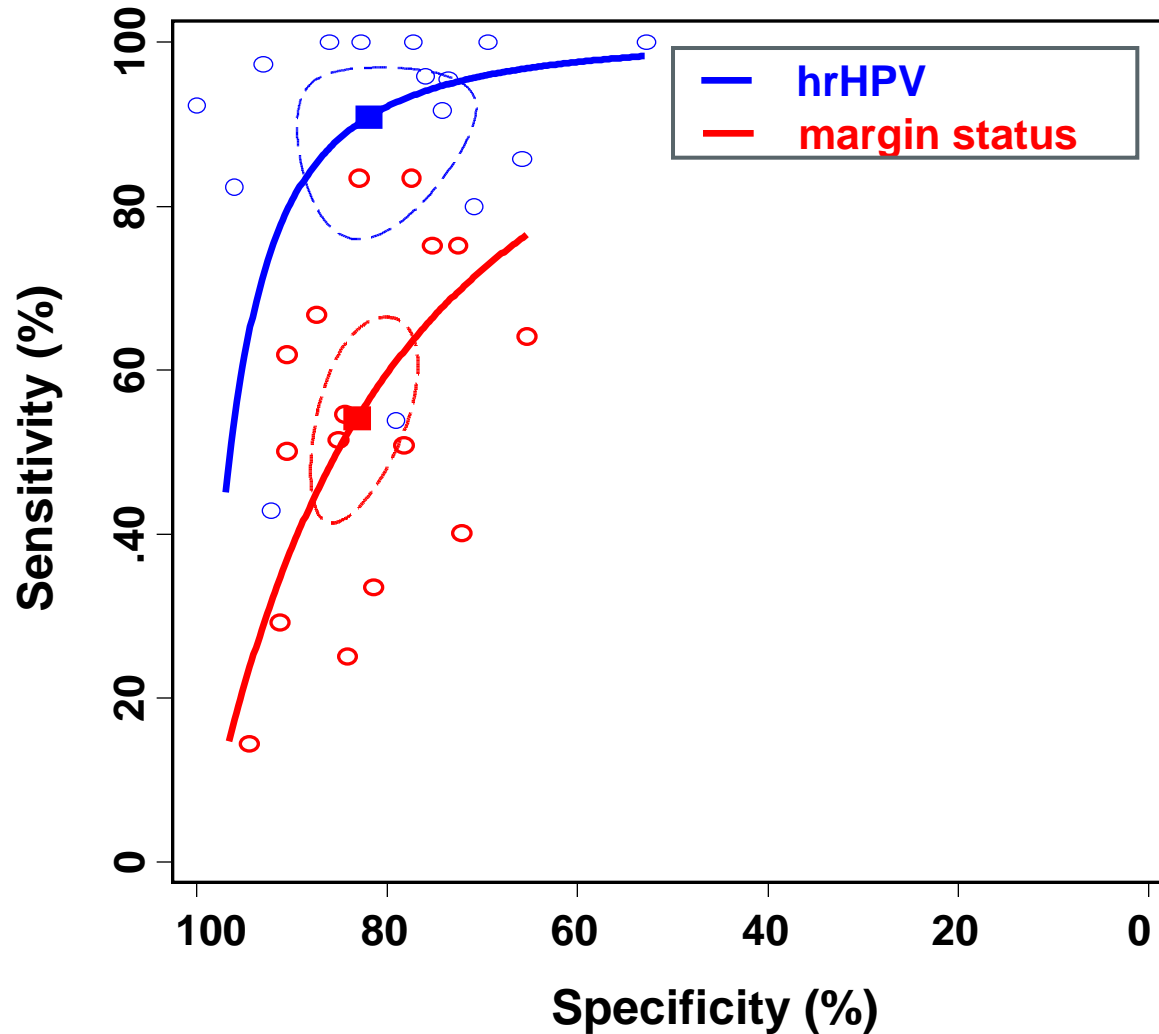
3.8%

Relative risk



4.9

Accuracy of **margin status** and **post-treatment HPV testing** to predict treatment failure



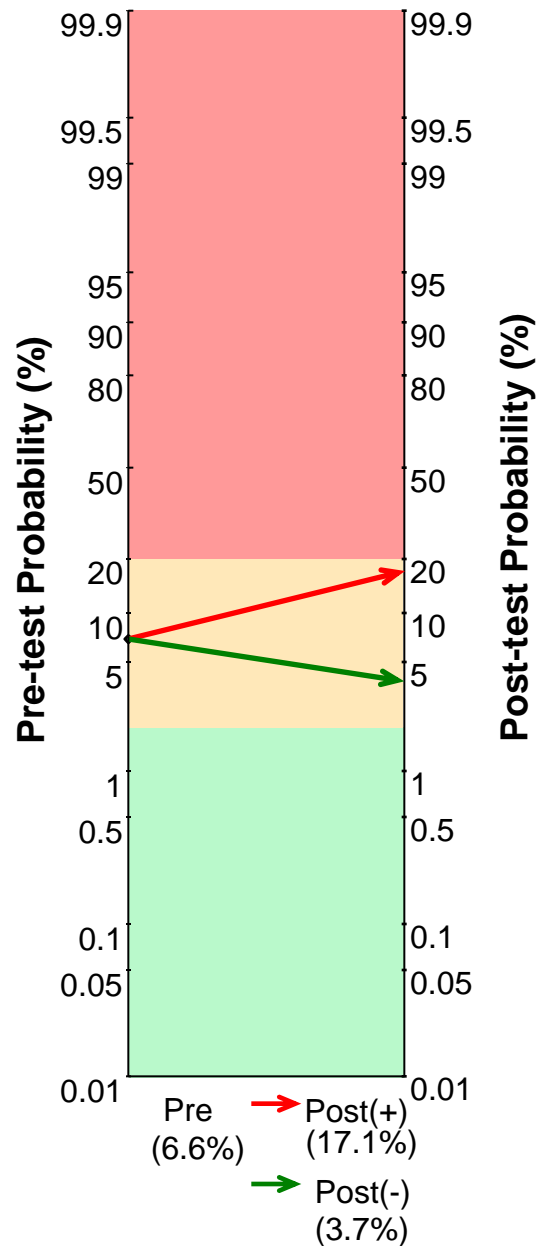
	Sensi	Speci
Margins	55.8%	84.4%
HPV	91.0%	83.8%

Accuracy of **margin status** and **post-treatment HPV testing** to predict treatment failure

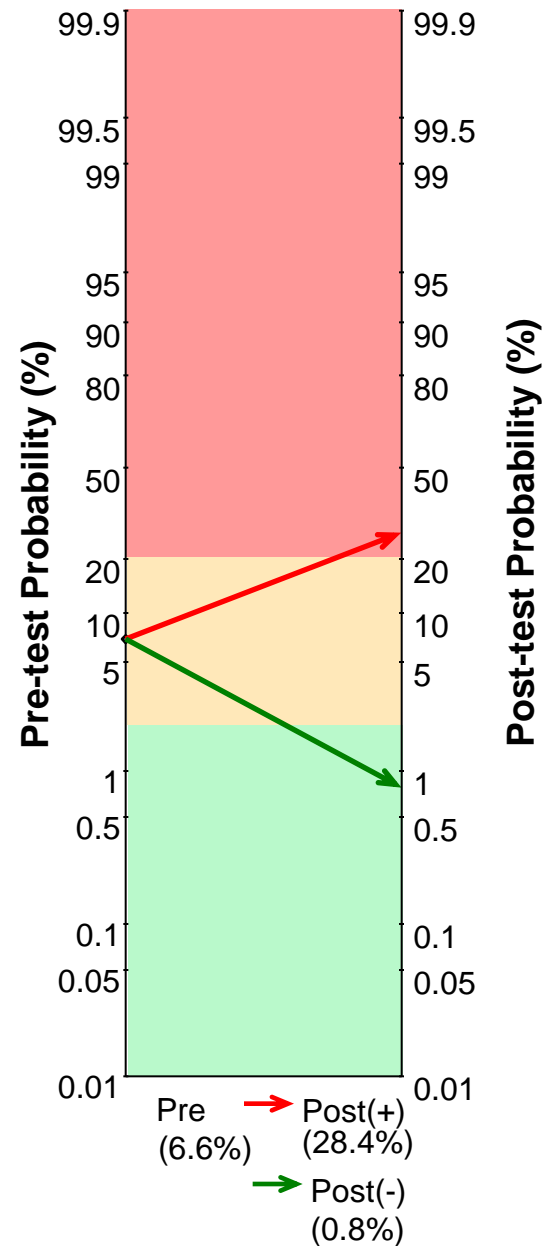
	Absolute sensitivity (95% CI)	Absolute specificity (95% CI)
Margins	55.8%(45.8-65.5%)	84.4%(79.5-88.4%)
hrHPV	91.0%(82.3-95.5%)	83.8%(77.7-88.7%)
margins vs HPV	Relative sensitivity 0.62 (0.53-0.72)	Relative specificity 1.01 (0.97-1.06)

Clinical utility of a test: PPP plot (pretest-posttest probability)

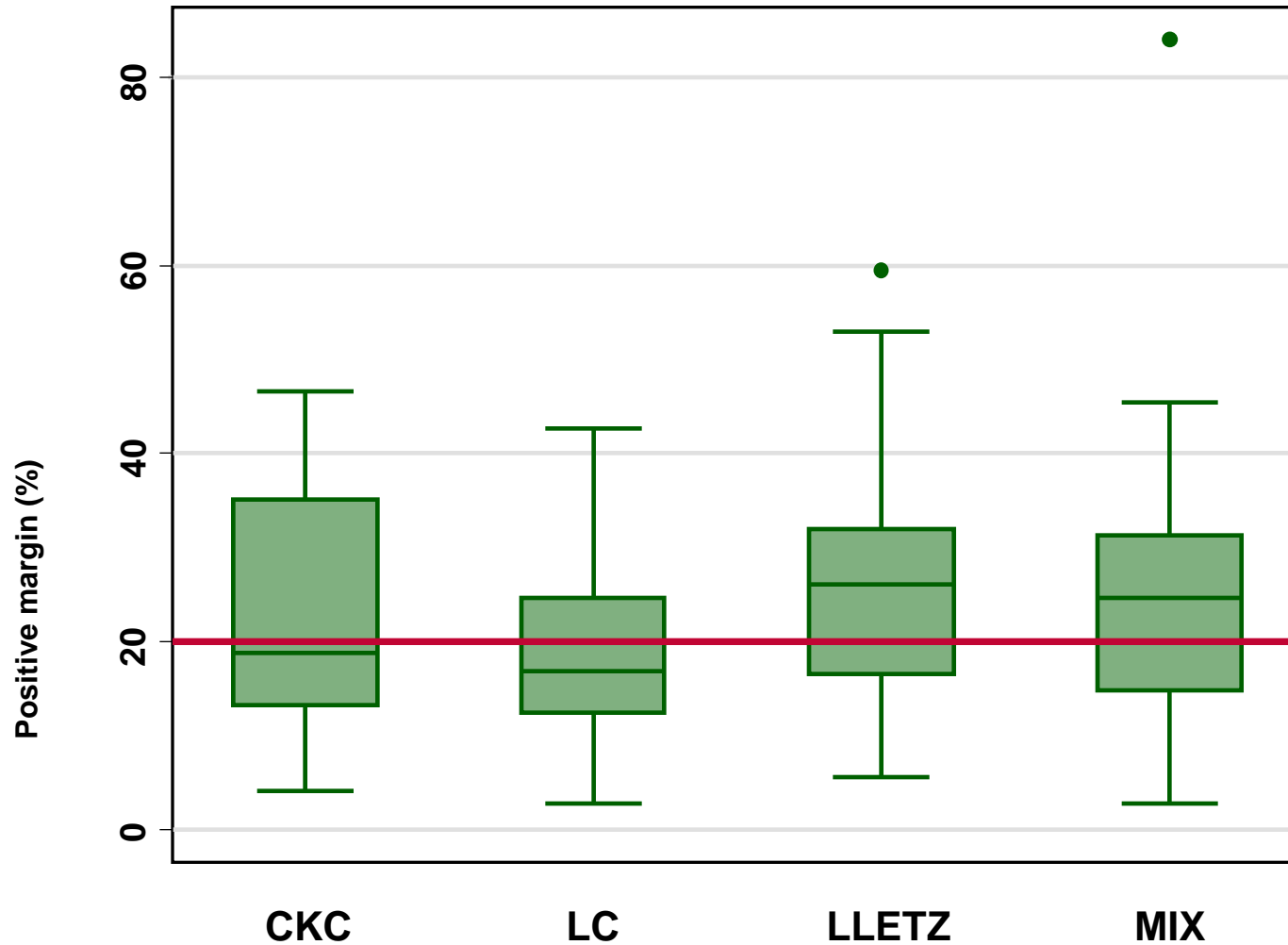
Margin status



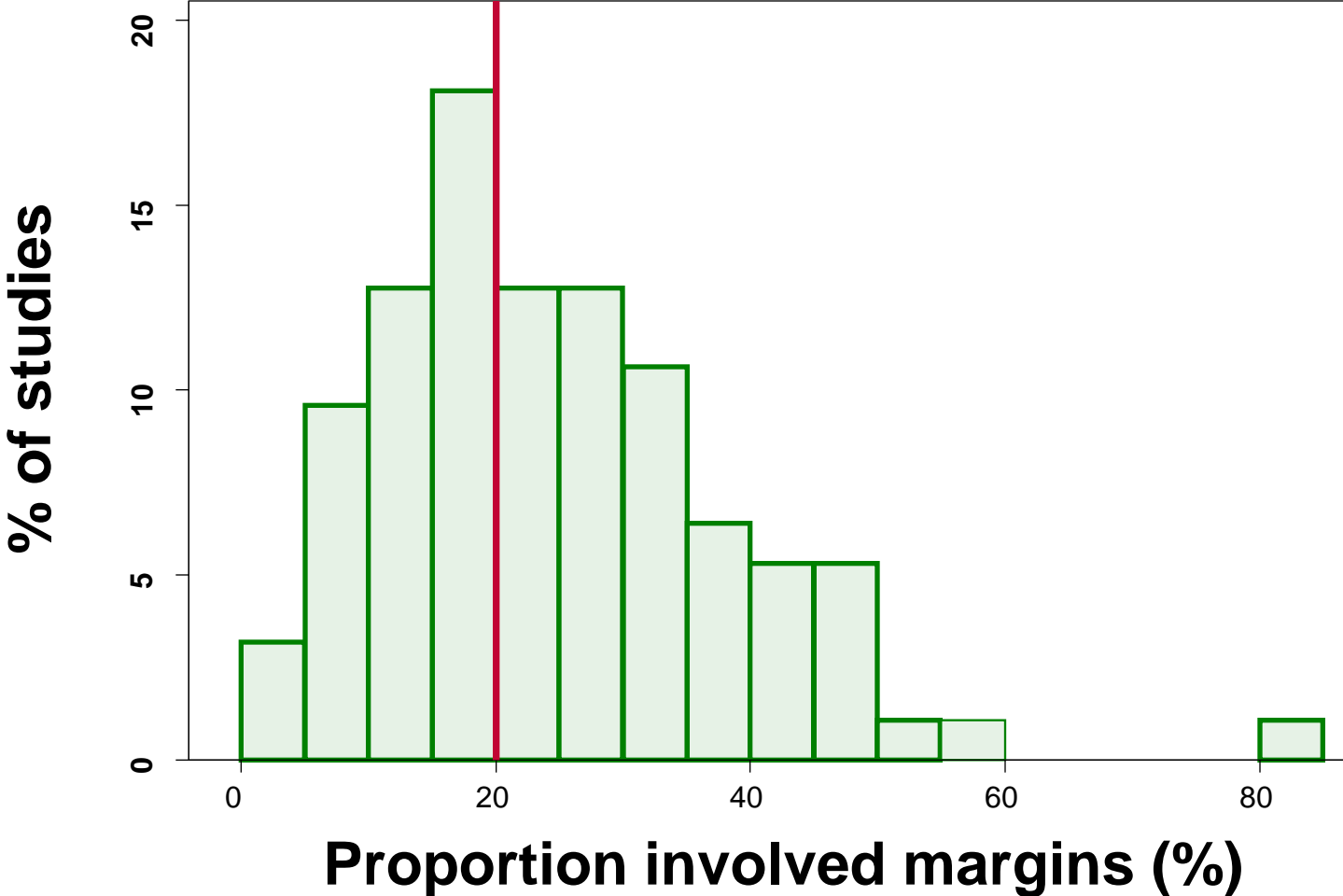
hrHPV



Margin status as quality indicator of good clinical practice



Margin status as quality indicator of good clinical practice



Test of cure

- **Women with positive margins show increased risk of treatment failure**
- **Post-treatment HPV testing: more accurate than margin status**
- **Margin status is not an accurate quality indicator in colposcopy practice**
- **Not even one study addresses both outcomes (obstetrical oncological safety) => object for new research)**
- **Update of EU guidelines on management of screen+ women needed**