
GYNTECT[®], A TRIAGE TEST FOR HIGH-RISK HUMAN PAPILLOMAVIRUS DNA-POSITIVE WOMEN, MAY HAVE PROGNOSTIC POTENTIAL

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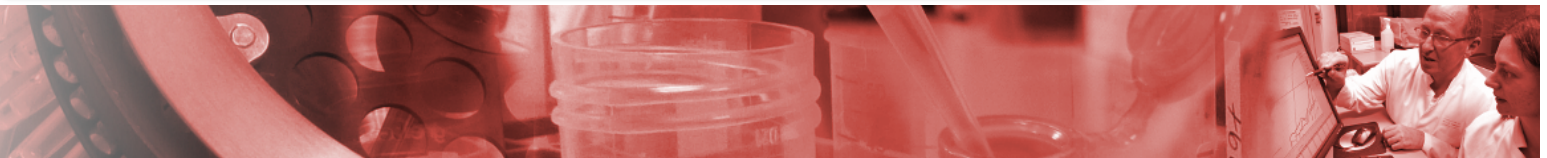
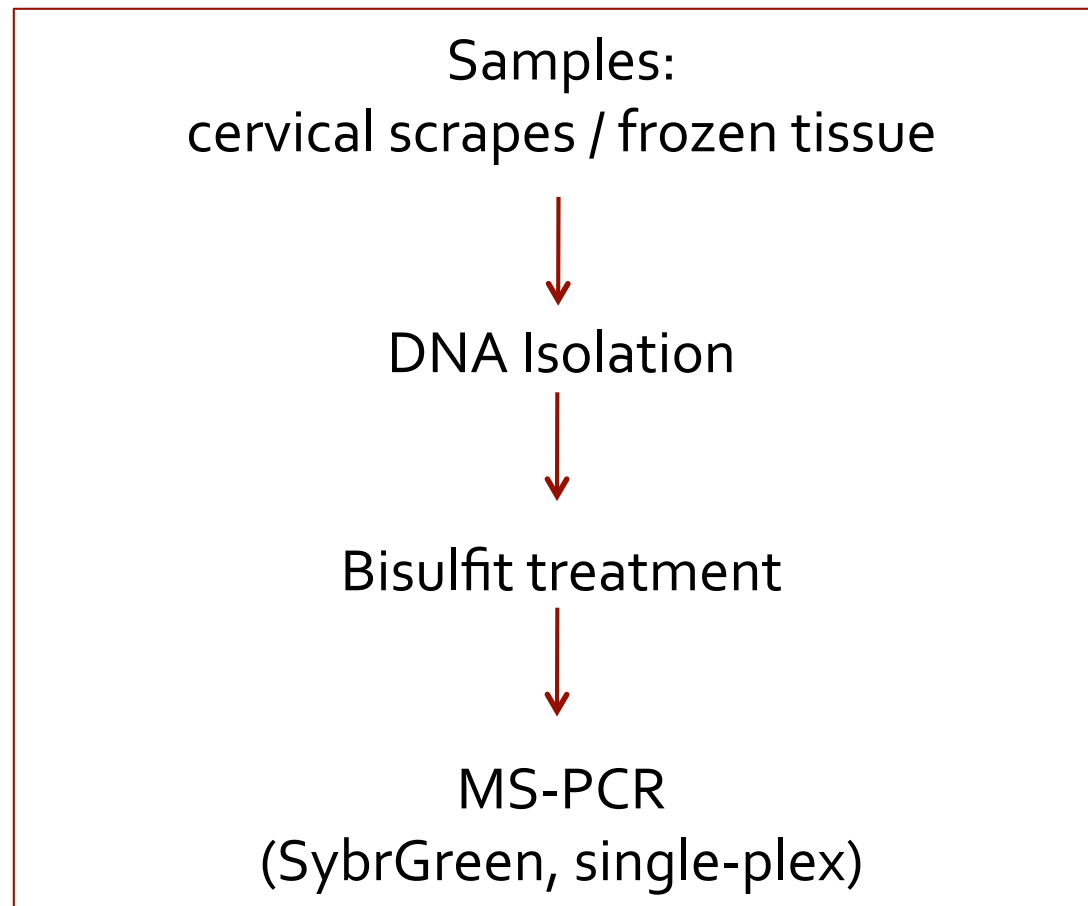
Conflict of interest

Hansel A, Schmitz M, Wunsch K and Dürst M are employees and/or shareholders of the oncgnostics GmbH, a company that aims to commercialize DNA methylation markers.



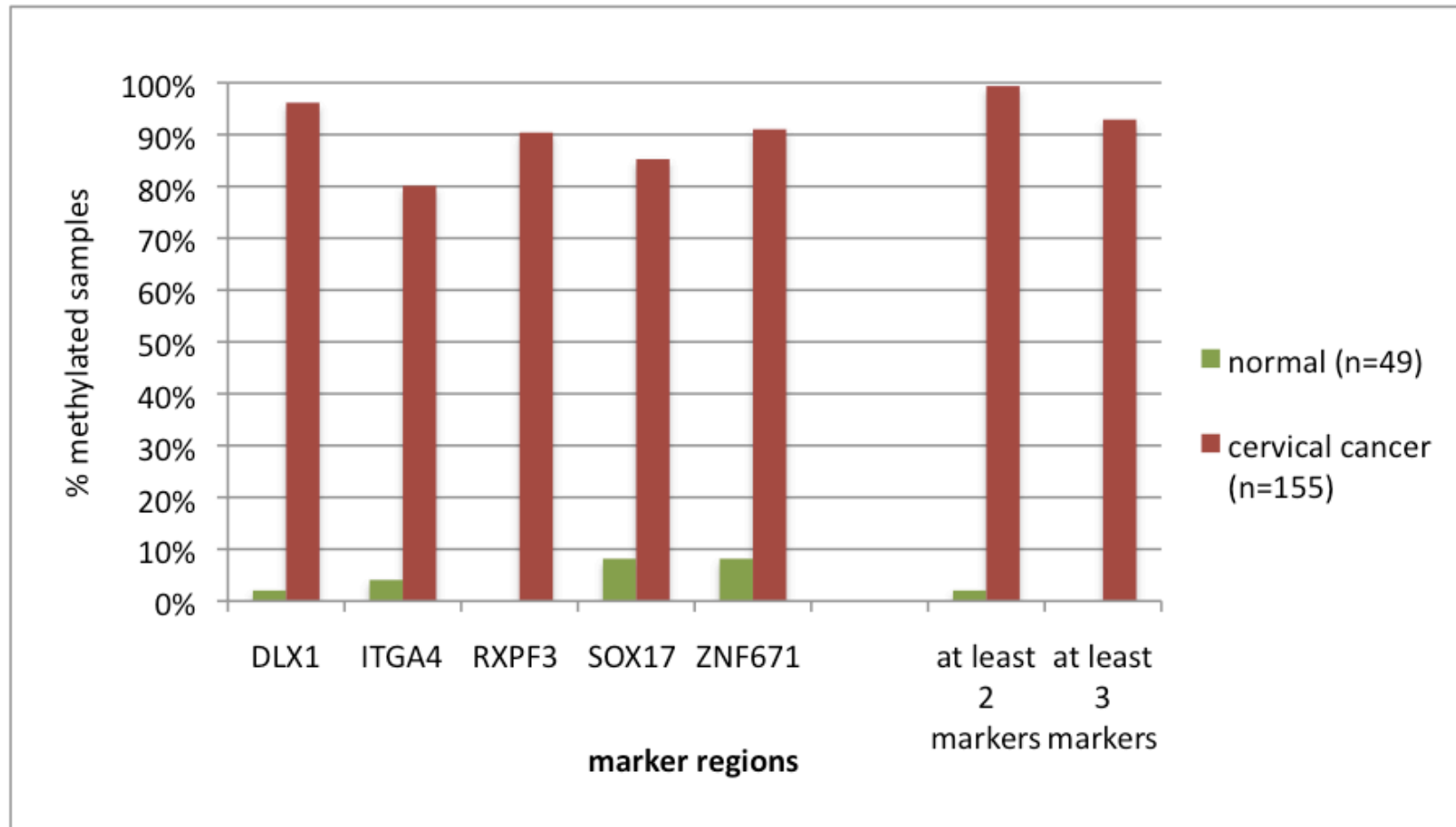
Use of methylation markers ...

... FOR THE TRIAGE OF HPV POSITIVE WOMEN AND/OR WOMEN WITH UNCLEAR CYTOLOGY

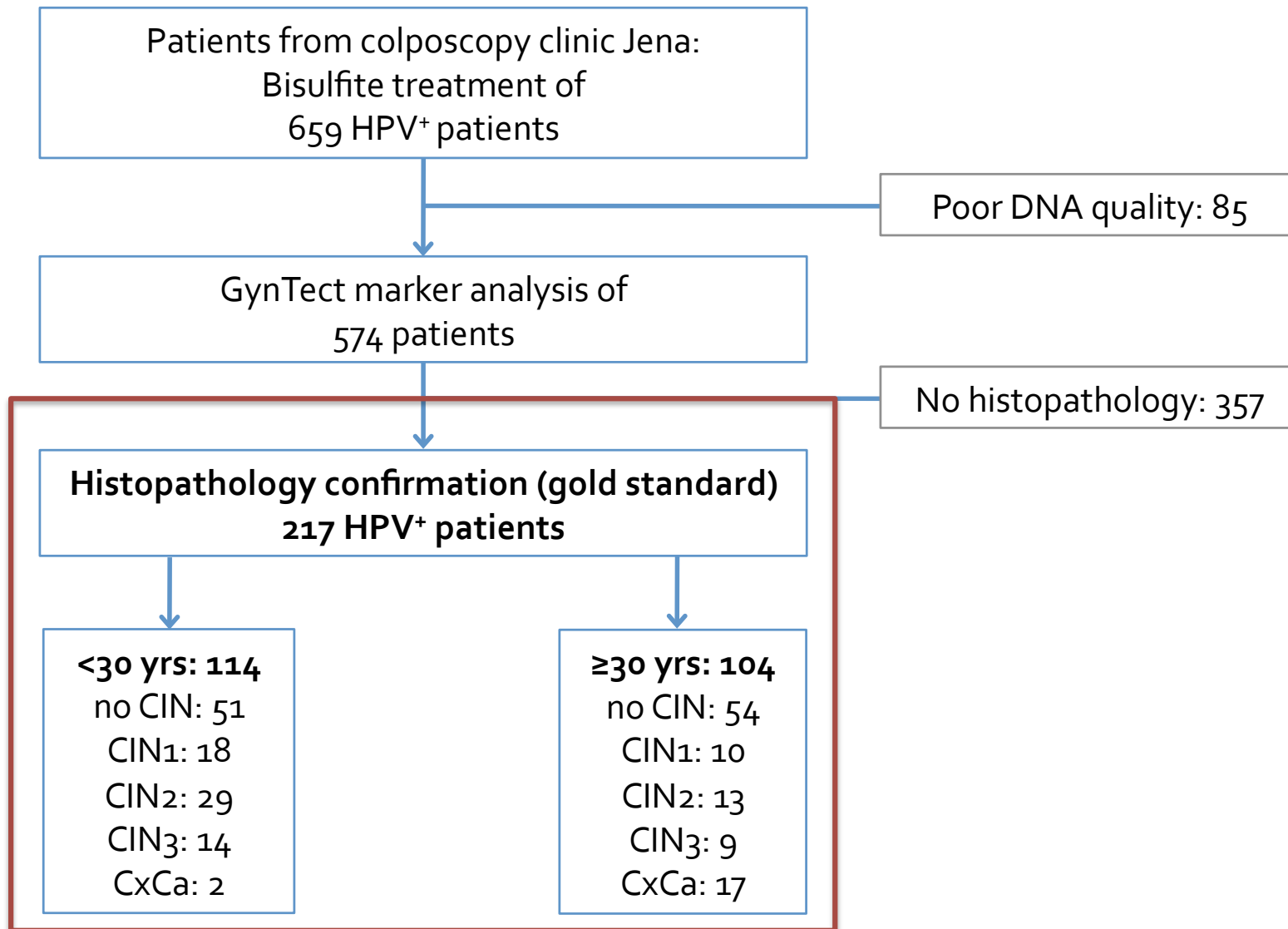


GynTect[®] – performance on tissue

GynTect marker tested on tissue samples, confirmed by histopathology

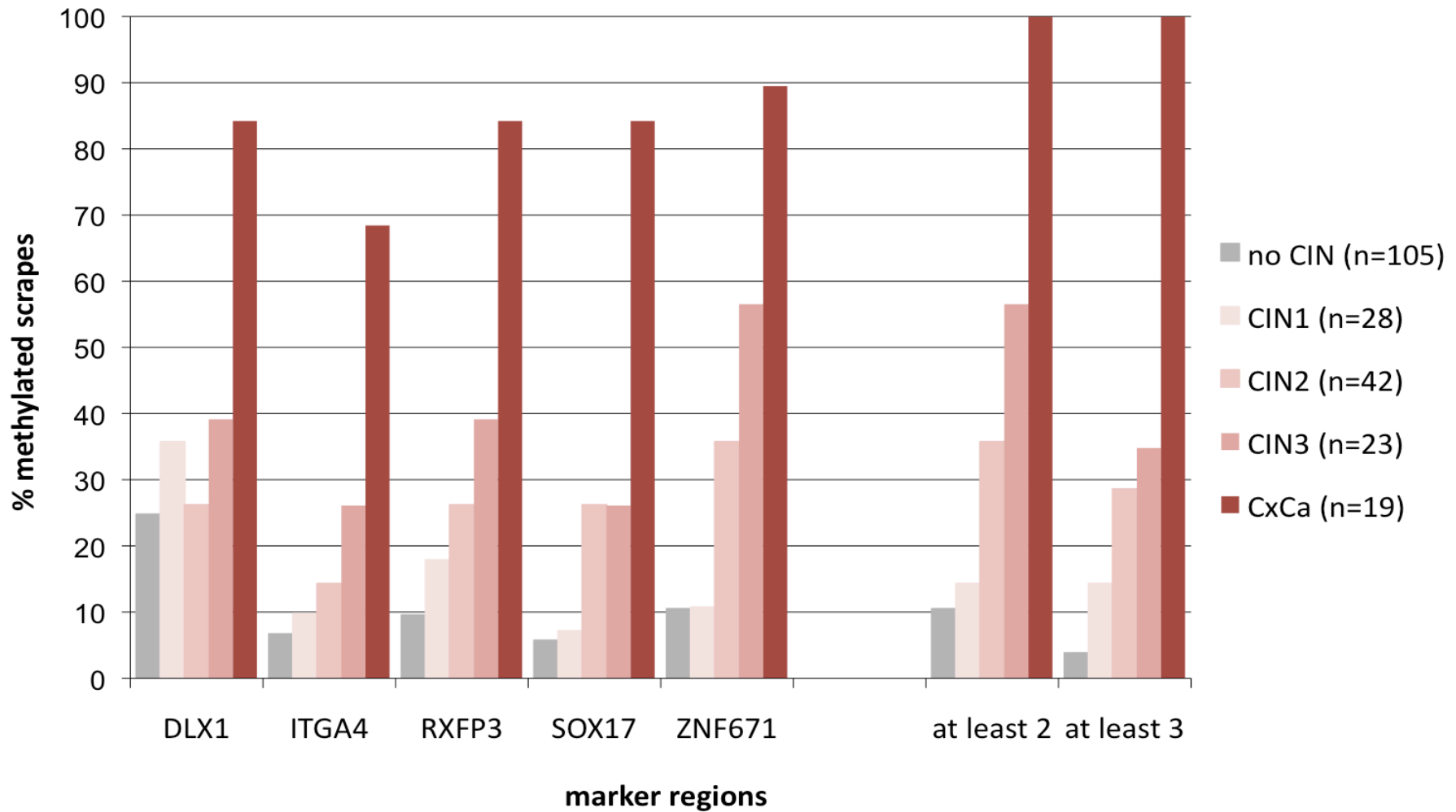


GynTect® – 1st trial



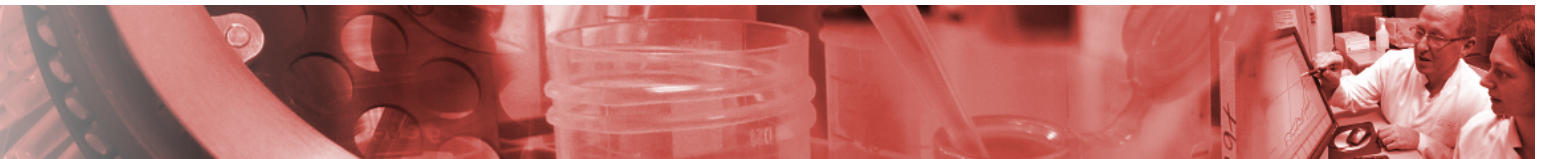
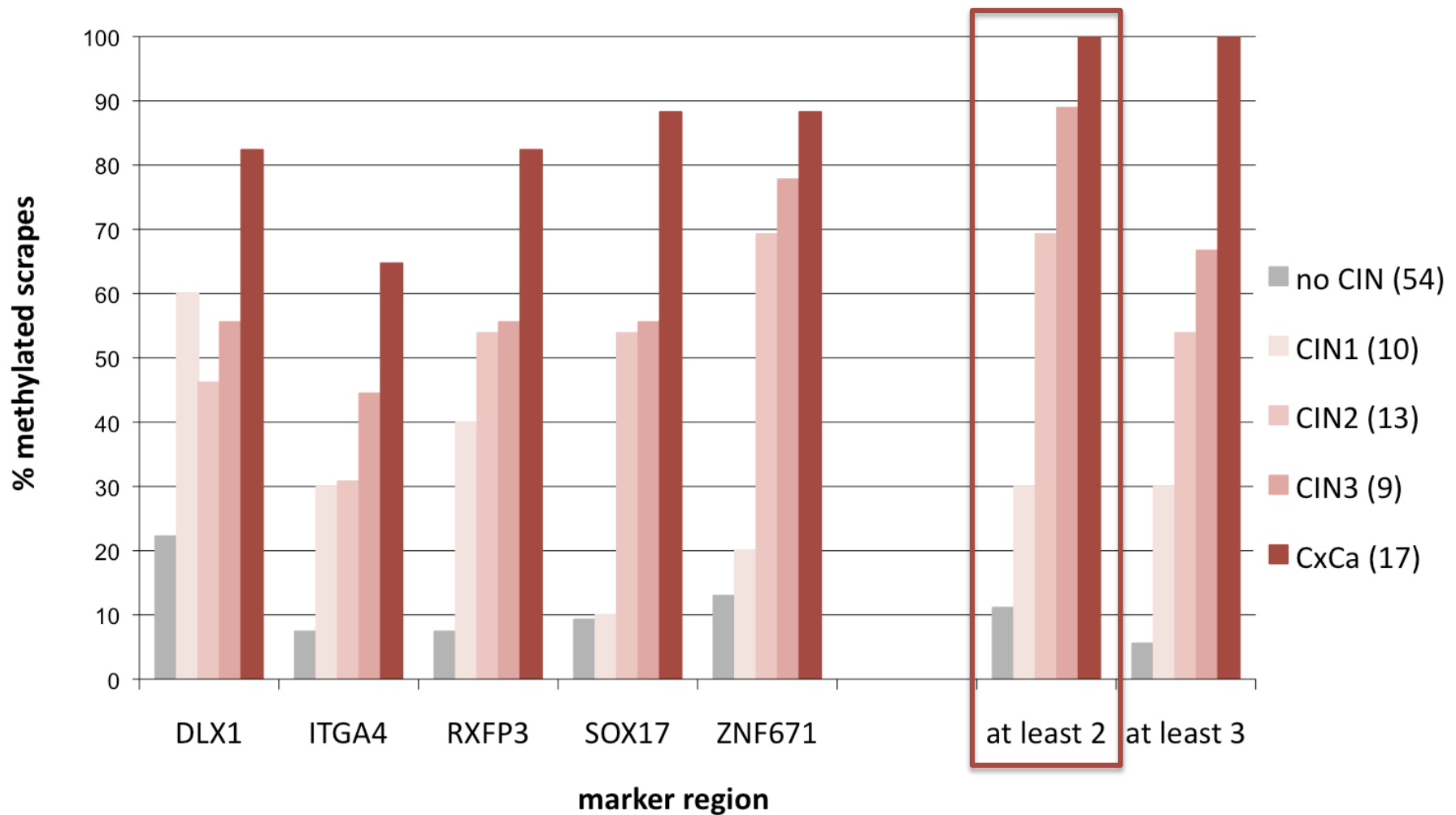
GynTect® – 1st trial

Performance for all women



GynTect® – 1st trial

Performance for women >30 years of age



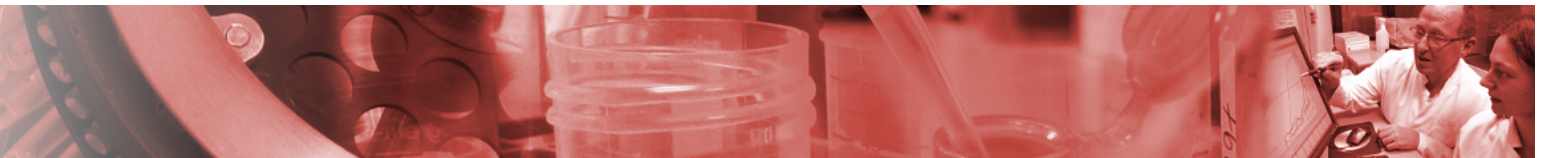
Diagnostic performance

Sensitivity and specificity in 1st trial

	Sensitivity CIN 2+	Specificity CIN 2+	Sensitivity CIN 3+	Specificity CIN 3+
both age groups	56.0% (44.7-66.8%)	88.7% (82.1-93.5%)	76.2% (60.5-87.9%)	82.9% (76.4-88.1%)
women < 30 years	28.9% (16.4-44.3%)	91.3% (82.0-96.7%)	43.8% (19.8-70,1%)	87.8% (79.6-93.5%)
women ≥ 30 years	87.2% (72.6-95.7%)	85.9% (75.0-93.4%)	96.2% (80.4-100%)	76.6% (65.6-85.5%)
p-value	<0.01	0.41	<0.01	0.07

Positive test result if 2 of 5 markers are methylated;

p-values: comparing test performance by age group refer to Fisher exact test.

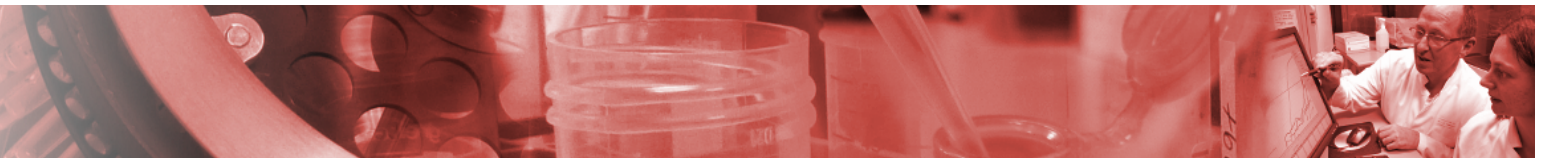


Diagnostic performance

Projection of diagnostic performance for a screening population* (>30 years of age)

	hrHPV positive women ≥ 30 years of age (target population)				
	No CIN	CIN1	CIN2	CIN3	CxCa
Distribution of disease status in target population (p)	59.4%	7.7%	7.7%	21.6%	3.6%
Proportion of methylation-positive women per group (m)	11.1%	30.0%	69.2%	88.9%	100.0%
Projected test performance	Sensitivity	Specificity	PPV	NPV	
CIN2+ (prev =32.9%)	85.5%	86.7%	76.0%	92.4%	
CIN3+ (prev =25.2%)	90.5%	81.0%	61.6%	96.2%	

*Schneider A, Hoyer H, Lotz B, Leistritz S, Kuhne-Heid R, et al. (2000) Screening for high-grade cervical intra-epithelial neoplasia and cancer by testing for high-risk HPV, routine cytology or colposcopy. Int J Cancer 89: 529-534.



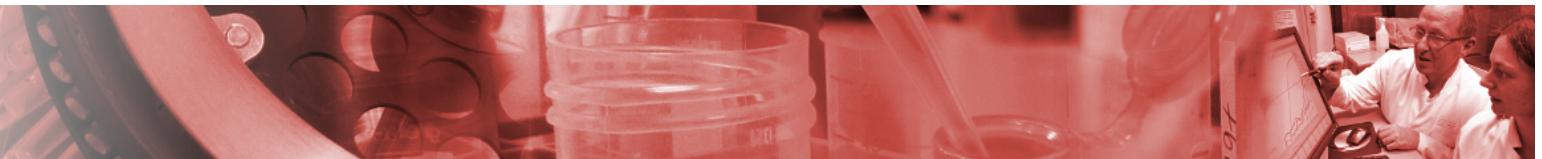
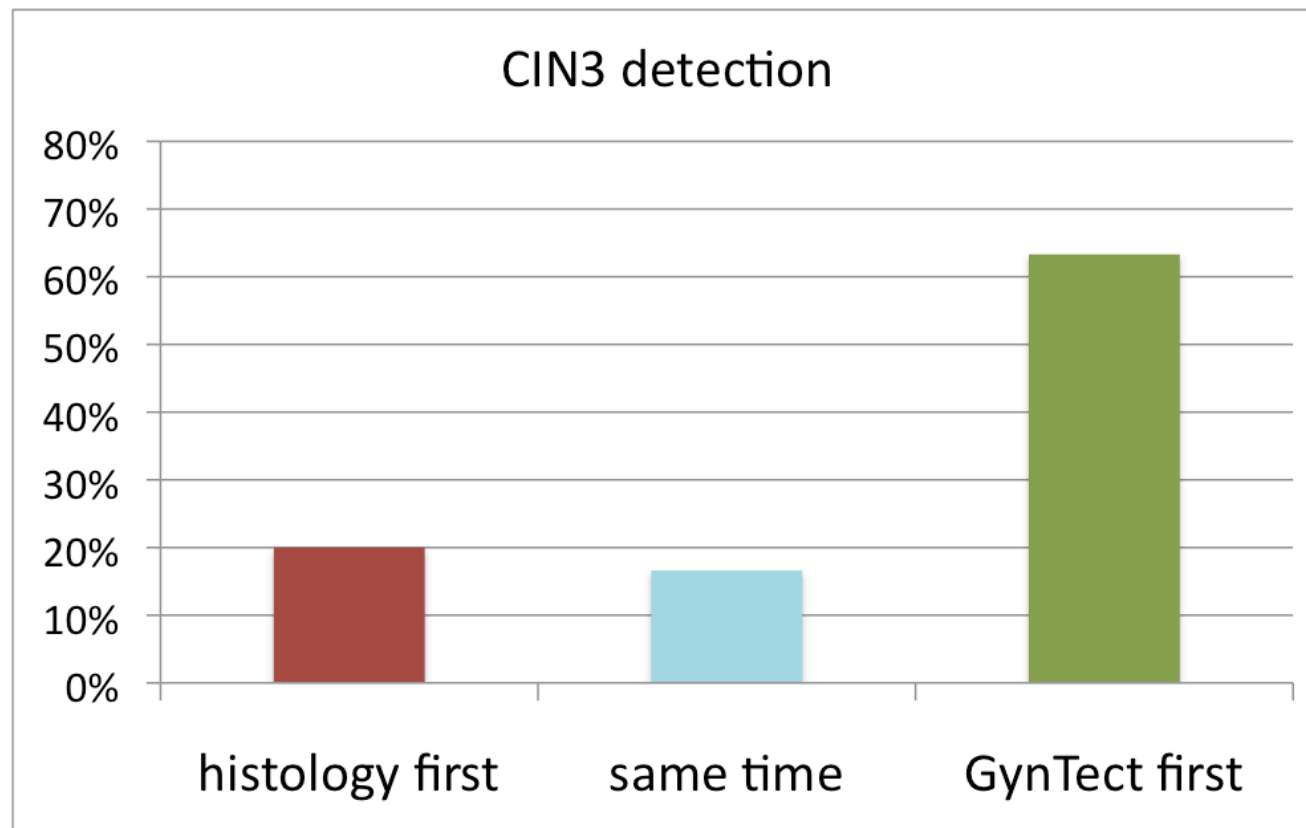
GynTect® – longitudinal trial

- 30 patients attended the colposcopy clinic more than once (2 up to 10 time points)
- Visit intervals: 3 month up to 8 years
- All patients had endpoint CIN 3 (histopathology confirmed)



GynTect® – longitudinal trial

GynTect markers could detect the (up-coming) disease earlier in more than 60% of all patients



GynTect® – longitudinal trial

In 16 patients GynTect markers was positive prior to any histological finding CIN1, CIN2 or CIN3.



GynTect® – longitudinal trial

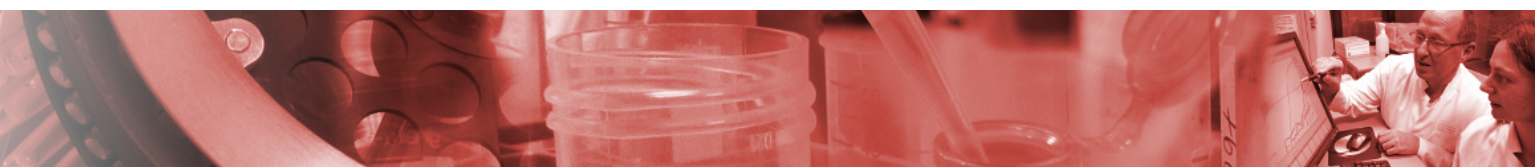
Age	method	different time points										
28	GynTect						1	2	1	1	4	
	Histology						no CIN	no CIN	no CIN	no CIN	CIN 3	
30	GynTect			0	1	0	1	2	1	0		
	Histology			no CIN	no CIN	no CIN	no CIN	no CIN	CIN 1	CIN 3		
24	GynTect						0	0	2	2	2	
	Histology						no CIN	no CIN	no CIN	CIN 3	CIN 3	
33	GynTect							0	4	2	2	
	Histology							no CIN	no CIN	no CIN	CIN 3	
42	GynTect							1	1	2	3	
	Histology							no CIN	no CIN	no CIN	CIN 3	
28	GynTect							0	1	2	2	
	Histology							no CIN	no CIN	no CIN	CIN 3	
28	GynTect							3	3	4	5	
	Histology							no CIN	no CIN	no CIN	CIN 3	
33	GynTect							4	5	5	4	
	Histology							no CIN	no CIN	no CIN	CIN 3	
74	GynTect						0	-	-	2	4	
	Histology						-	-	-	no CIN	CIN 3	
33	GynTect							2	1	5	4	5
	Histology							-	-	-	no CIN	CIN 3
42	GynTect							-	-	-	5	5
	Histology							-	-	-	no CIN	CIN 3
34	GynTect	-	-	2	1	1	2	4	2*	-	-	
	Histology	no CIN	no CIN	no CIN	no CIN	no CIN	no CIN	no CIN	no CIN	no CIN	CIN 3	
33	GynTect							-	1	3	4	5
	Histology							-	-	no CIN	CIN 3	CIN 3
40	GynTect					-	-	-	5	0	5	
	Histology					-	-	-	-	no CIN	CIN 3	
39	GynTect					3	0	1	1	2	2	
	Histology					-	-	no CIN	no CIN	no CIN	CIN 3	
27	GynTect								2	1	5	
	Histology									CIN 3	CIN 3	



GynTect® – longitudinal trial

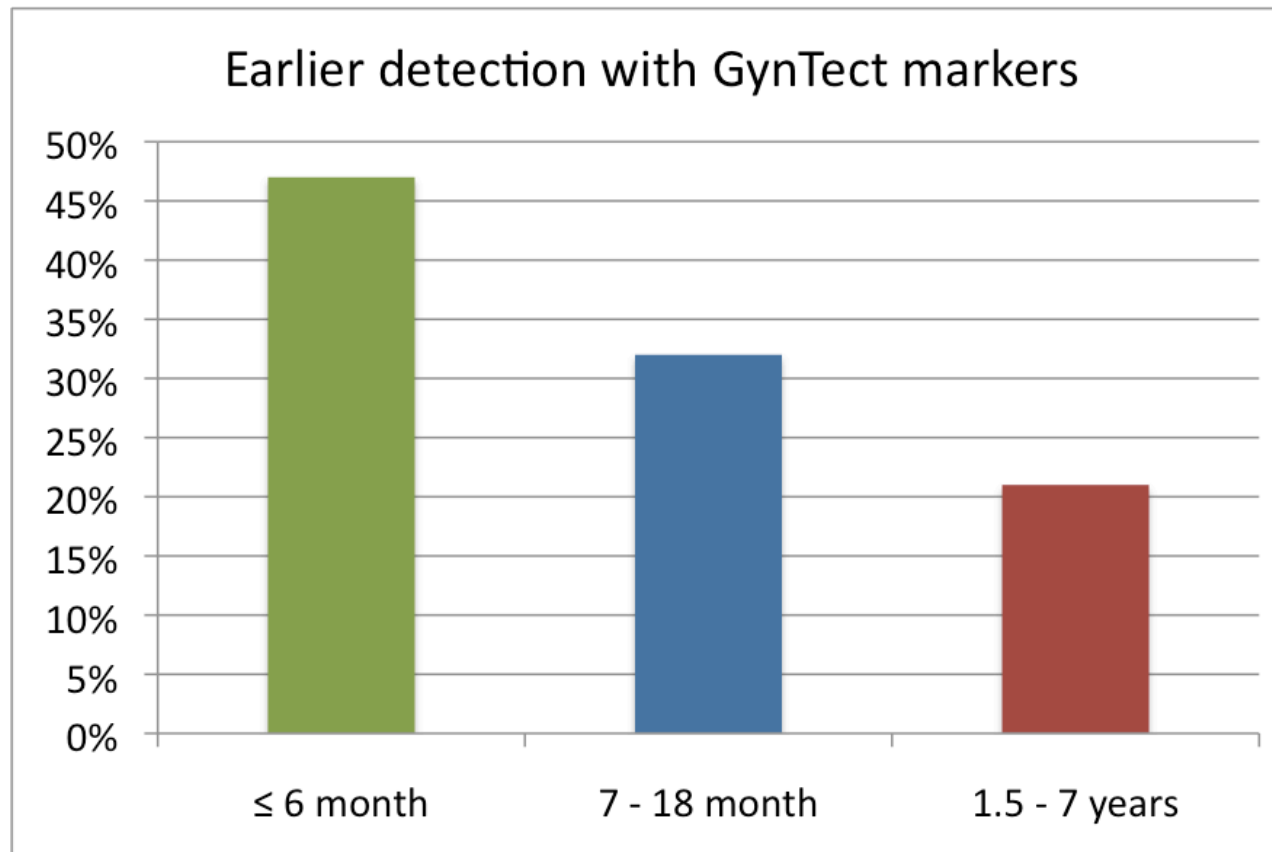
Detected at the same time point:
4 patients were detected simultaneously

Age	method	different time points									
30	GynTect									1	4
	Histology									no CIN	CIN 3
25	GynTect				0	1	1	0	1	5	5
	Histology				no CIN	no CIN	no CIN	no CIN	no CIN	no CIN	CIN 3
33	GynTect				-	-	0	5	5	5	5
	Histology				-	-	no CIN	CIN 2	CIN 2	CIN 3	CIN 3
34	GynTect				5	4	4	4	-	4	4
	Histology				CIN 3	CIN 3	CIN 3	no CIN	CIN 3	CIN 3	CIN 3
29	GynTect				5	5	5	4	3	4	4
	Histology				CIN 3	no CIN	no CIN	no CIN	no CIN	no CIN	CIN 3



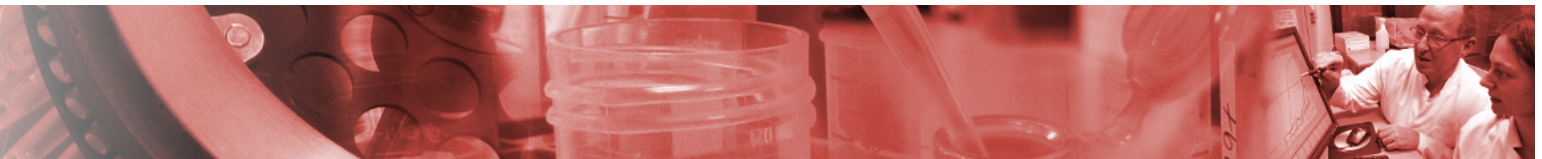
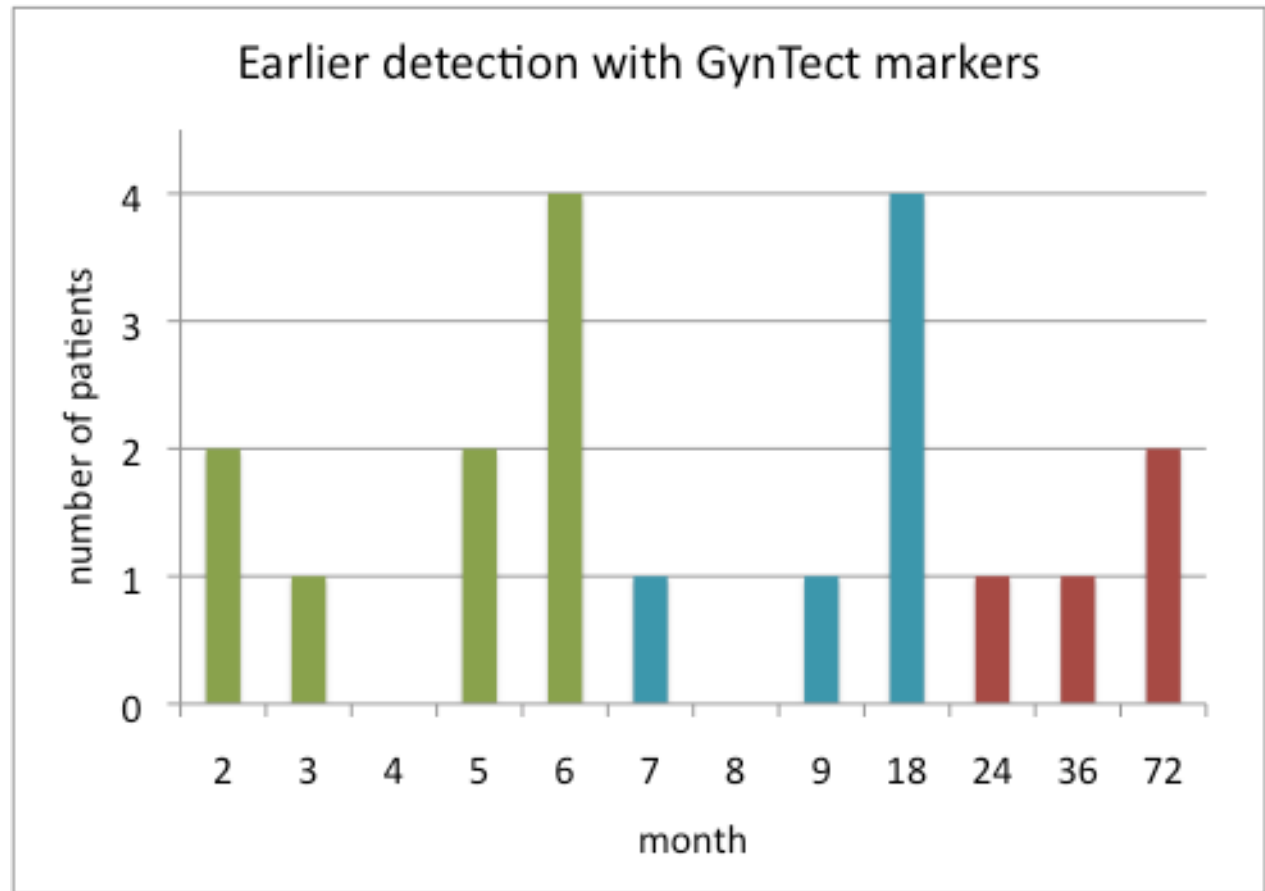
GynTect® – longitudinal trial

Time duration between detection with histopathology and the first positive results with GynTect markers



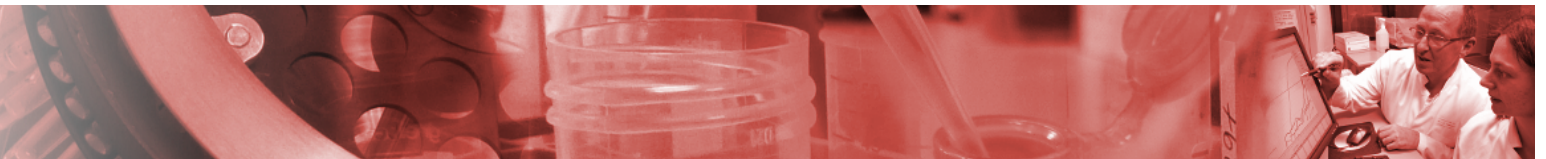
GynTect® – longitudinal trial

Interval for earlier detection	% of earlier detected patients
≤ 6 month	47%
7-18 month	32%
1,5 – 6 years	21%

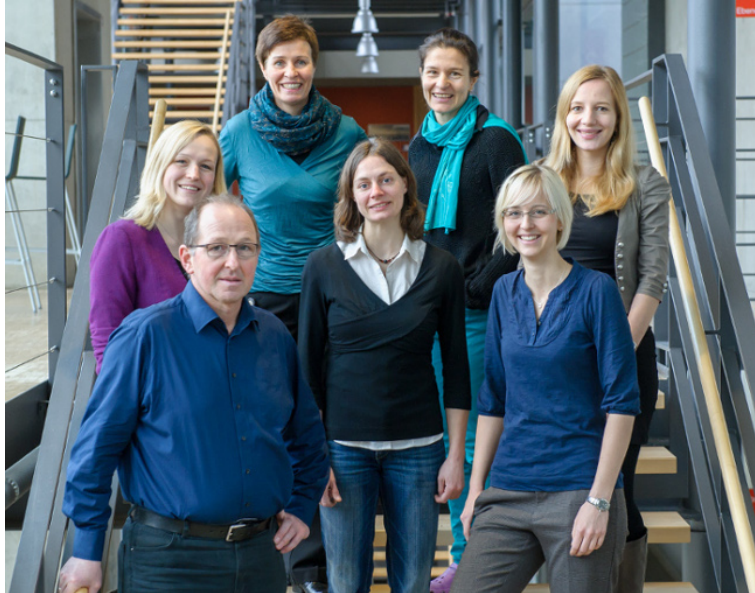


Conclusions

- GynTect markers show good sensitivity AND specificity on HPV-positive tested cervical scrapes
- These methylation markers may have prognostic potential and may be able to differentiate between malign and non-malign lesions
- Longitudinal study is ongoing including additional 80 patients



Thank you for your attention!



- oncgnostics GmbH

- Lab of Matthias Dürst
- Center of clinical statistics



Contact: martina.schmitz@oncgnostics.com

