

Cryotherapy has No Place in Colposcopy Practice Con

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Disclosures

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Four points about Cryotherapy

- Efficacious
- Safe
- Viable alternative to surveillance for CIN 2
- High-value option



Cryotherapy: Efficacy

12-month cure rates for CIN 2 or CIN 3

Cryotherapy (%)	Loop excision (%)	Reference
93-94	91-99	Martin-Hirsch, 2013
94.7	94.7	Santesso, 2016
92.0	97.6	Chirenje, 2001

WHO Recommendation, 2016, Santesso: “For all screen-and-treat recommendations, cryotherapy is first choice of treatment for women who are screened positive and eligible for cryotherapy.”



Cryotherapy: Safety, peri-procedure outcomes

Outcome	Cryotherapy (%)	Loop excision (%)	Reference
Major bleeding	0.03	0.23	Santesso, 2016
	RCT	0.5	Chirenje, 2001
Severe pain	3.6	0.7	Chamot, 2010
	RCT	1.0	Chirenje, 2001

Santesso, 2016: “Generally, there were more adverse events with... LEEP than with cryotherapy.”



Cryotherapy: Safety, short-term outcomes

Outcome	Cryotherapy (%)	Loop excision (%)	Reference
Pain, longer term to next menses	9.0	66.8	Chamot, 2010
RCT, 2-week	44	46	Chirenje, 2001
Vaginal discharge, watery	65.0	“most”	Chamot, 2010
RCT, 2-week	92.4	78.5	Chirenje, 2001
Vaginal discharge, offensive	2.0	3.2	Chamot, 2010
RCT, 2-week	68.2	79.0	Chirenje, 2001
Acceptability, 2-weeks	91	96	“

Cochrane, 2013: “The evidence suggests that there is no obvious superior surgical technique for treating cervical intraepithelial neoplasia in terms of treatment failures or operative morbidity.”



Cryotherapy: Safety, longer-term outcomes

Outcome	Cryotherapy	Large loop excision of TZ	Reference
Pre-term birth			
<37 weeks	1.02 (0.22-1.77)	1.56 (1.36-1.79)	Kyrgiou, 2016
<32-34 weeks	1.86 (0.08-43.9)	2.13 (1.66-2.74)	“
<28-30 weeks	1.38 (0.81-2.36)	2.57 (1.97-3.35)	“
Repeat treatment			
<37 weeks	--	2.81 (2.33-3.39)	“
Depth ≤10-12 mm	--	2.01 (1.28-3.15)	“

Observational evidence mixed. No randomized trials.



Cryotherapy: Safety, longer-term outcomes

ASCCP, 2012: “Studies of the effect of treatment on future pregnancy are conflicting... Nevertheless, because pregnancy complications can be devastating, the potential benefits of treatment should be balanced against the risk to future pregnancies.”

ACOG, 2016: “Avoiding unnecessary excision or ablation of the cervix in young women clearly is advisable even though the association between LEEP and preterm birth has been challenged.”

Santesso, 2016: “The quality of the evidence for all outcomes was low to very low.”



Viable alternative for CIN 2 surveillance

HPV-based strategies -> increased diagnoses of CIN 2

HPV triage of ASC-US (ALTS 2003)

Primary HPV testing (Patanwala 2013)

CIN 2 has high spontaneous regression rates: 38-44% in
6-12 months (ALTS 2003; Moscicki 2010; Helm 2013)



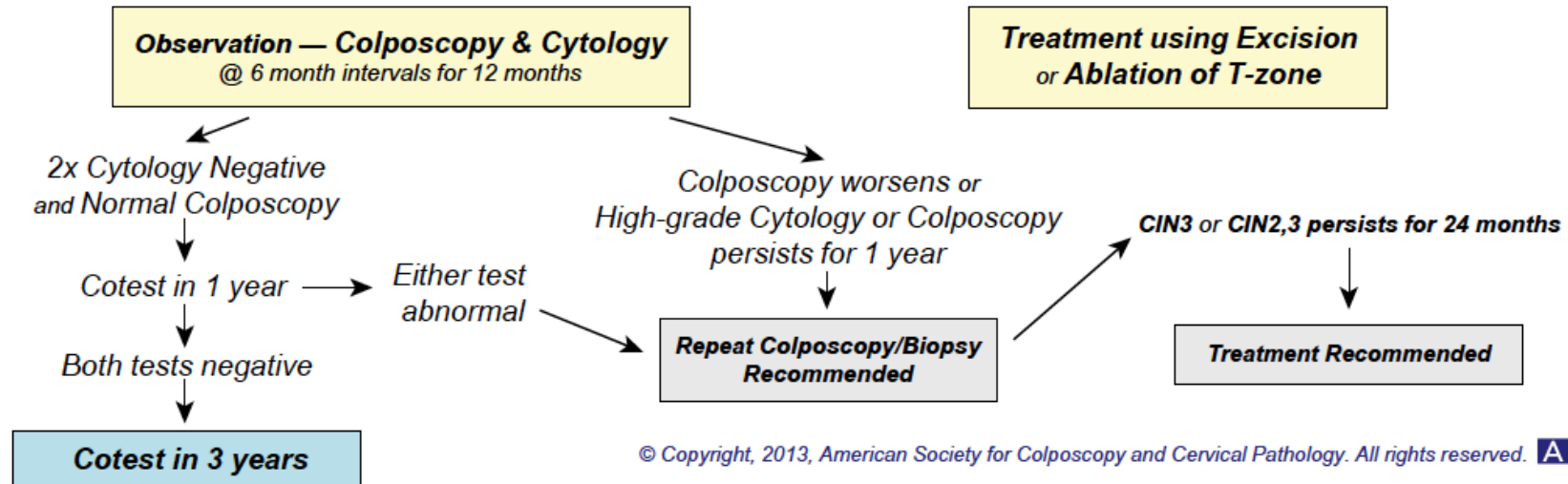
ASCCP, 2012: CIN 2, 2/3 management

CIN2,3 in Young Women

Management of Young Women with Biopsy-confirmed Cervical Intraepithelial Neoplasia — Grade 2,3 (CIN2,3) in Special Circumstances

Young Women with CIN2,3

Either treatment or observation is acceptable, **provided colposcopy is adequate**. When CIN2 is specified, observation is preferred. When CIN3 is specified, or colposcopy is inadequate, treatment is preferred.



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Viable alternative for CIN 2 surveillance

Problems with surveillance

- Conversion to inadequate colposcopy -> excision
- ASCCP 2012 regarding surveillance: “Treatment is recommended **if colposcopy is inadequate**, if CIN 3 is specified, **or** if CIN 2 or CIN 2,3 persists for 24 months.”
- Resource intensive
- Adverse psychological effects (Sharp 2014)
- High default rates (Kyrgiou 2007, 2016)



Viable alternative for CIN 2 surveillance

Candidacy for cryotherapy as per WHO 2011 Guidelines

- adequate colposcopy
- lesion(s) completely visible
- lesion(s) not covering more than 75% of the ectocervix
- lesion(s) can be covered entirely with the cryoprobe

<http://www.who.int/reproductivehealth/publications/cancers/9789241502856/en/>



Viable alternative for CIN 2 surveillance

12-month cure with surveillance: ~40%

12-month cure with cryotherapy: ~90%

Number needed to treat for benefit: $1/0.50 = 2$

For every 2 women treated with cryotherapy compared with surveillance, 1 will be cured.



Cryotherapy: a High-Value option

- Systems perspective: flexible, relatively inexpensive
- Patient perspective: highly acceptable, efficient



Conclusion

Cryotherapy has an important place in colposcopy practice

- Efficacious
- Safe
- Viable alternative to surveillance for CIN 2
- High-value option



Conclusion

Cryotherapy has an important place in **patient-centered care**

Cryotherapy should at least be offered to women who are appropriate candidates

- *as an alternative to loop excision*

- *as an alternative to surveillance for CIN 2, CIN 2/3*

