

Cold Resection of Large Lesions with  
**Exacto<sup>®</sup> cold snare**

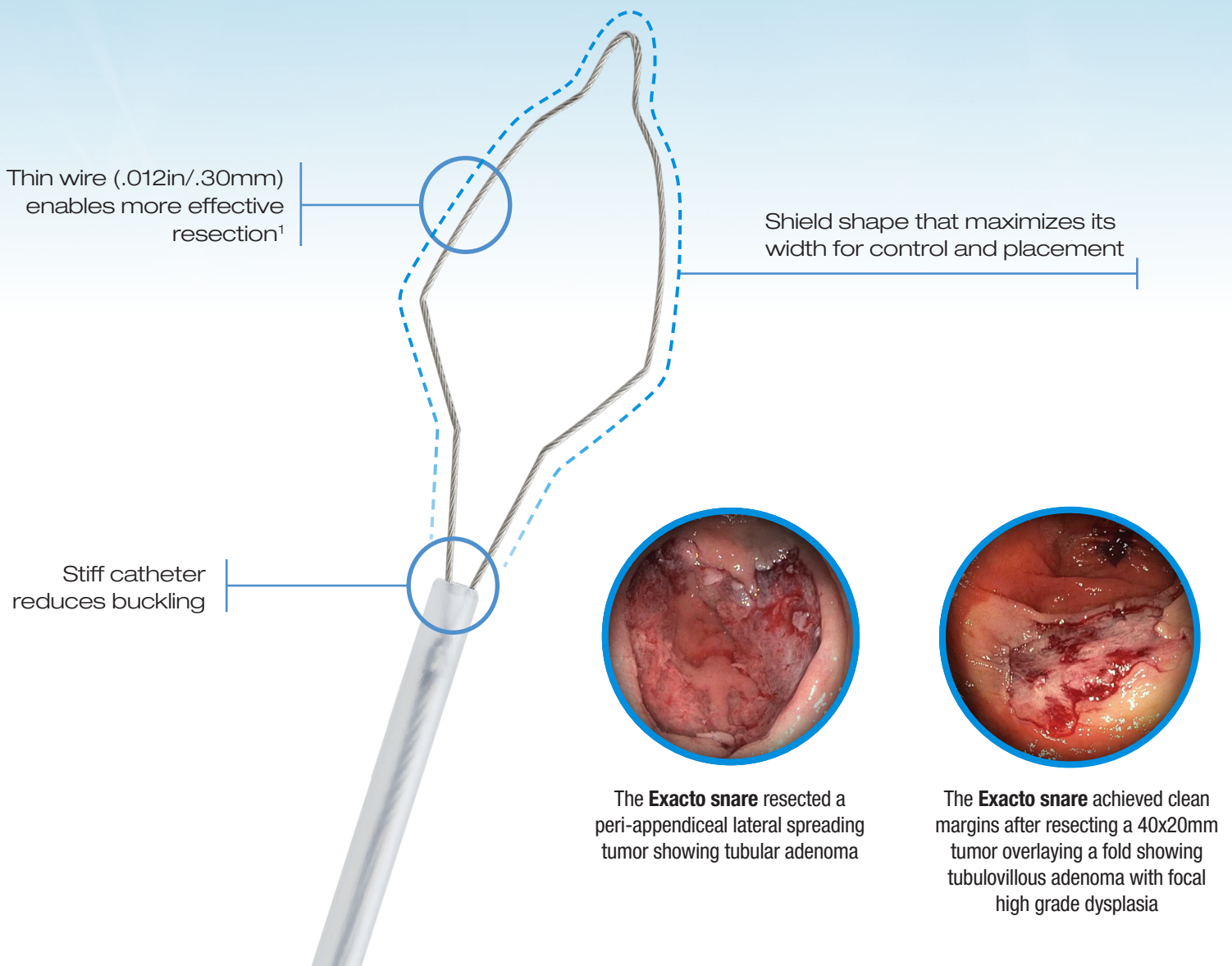


Endoscopy

## Unique Design, Superior Performance

The Exacto cold snare has been specifically designed to optimize cold resection.

### The Exacto cold snare features...



The **Exacto cold snare** is clinically proven to achieve a significantly higher rate of complete resection when compared to traditional snares.<sup>2,3</sup>

1. D. Hewett. "Cold snare polypectomy: optimizing technique and technology (with videos)." *Gastrointestinal Endoscopy* 2015.  
2. Horiuchi A, Hosoi K. "Prospective, Randomized Comparison of 2 Methods of Cold Snare Polypectomy for Small Colorectal Polyps." *Gastrointestinal Endoscopy* (2015); 1-7.  
3. Din S, Ball A. "Cold Snare Polypectomy: Does Snare Type Influence Outcomes?" *Digestive Endoscopy* (2015); 1-6.

Cold snaring is currently recommended in the United States and Europe for removal of diminutive and small polyps due to its safety profile and complete resection rates. As guidelines and practices move towards endoscopic procedures over surgery, polypectomy snaring and endoscopic mucosal resection (EMR) are trending to resect larger, more complicated lesions.<sup>1, 2</sup>

*As the first dedicated cold snare, the Exacto cold snare from STERIS Endoscopy is proven to deliver results as demonstrated through clinical evidence supporting cold resection techniques for polyps >10mm.*

*Scan the QR code to access a clinical video of the Exacto cold snare in the cold resection of a large adenoma. In this video, Dr. Zachary Smith utilizes the Exacto snare to safely and effectively resect a 3.5cm right colon tubulovillous adenoma.*



1. T. Kaltenbach, J. Anderson, C. Burke, J. Dominitz, S. Gupta, D. Liberman, D. Robertson, A. Shaukat, S. Syngal, D. Rex. "Endoscopic Removal of Colorectal Lesions – Recommendations by the US Multi-Society Task Force on Colorectal Cancer." *Gastrointestinal Endoscopy* (2020).

2. M. Ferlitsch, A. Moss, C. Hassan, P. Bhandari. "Colorectal polypectomy and endoscopic mucosal resection (EMR): European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline" *Endoscopy* 2017; 49(03): 270-297

# Cold Snare Endoscopic Resection of Nonpedunculated Colorectal Polyps Larger Than 10mm: A Systematic Review and Pooled-analysis

Viveksandeeep Thoguluva Chandrasekar, Marco Spadaccini, MD, Muhammad Aziz, Roberta Maselli, Seemeen Hassan, Lorenzo Fuccio, Abhiram Duvvuri, Leonardo Frazzoni, Madhav Desai, Alessandro Fugazza, Ramprasad Jegadeesan, Matteo Colombo, Chandra Skekhar Dasari, Cesare Hassan, Prateek Sharma, and Alessandro Repici

## Study Background

- Traditional hot snare polypectomy (HSP) and EMR are widely used for the removal of large polyps. Complications such as post-polypectomy bleeding and perforation can occur with the use of cautery.
- Cold snare polypectomy (CSP) is supported for small polyps as it reduces the adverse events seen with HSP.
- New data is available supporting CSP for the removal of large polyps as well:
  - » Dedicated cold snares were developed to provide cleaner resection sites
  - » CSP after submucosal injection has shown advantages such as reducing bleeding, decreasing risk of perforation and post-polypectomy syndrome
  - » Cold EMR has extended to include piecemeal polypectomy
  - » CSP, after submucosal injection, has efficacy for various histologic types of polyps, such as sessile serrated polyps and adenomas
- This article evaluated literature regarding CSP of large lesions for safety and efficacy.

## Results

- Complete resection rate was reported in all studies for a pooled total of 99.3%.
- No delayed bleeding or perforations were reported in cold EMR of large polyps, which is notably lower than that of hot EMR (2.2 – 6.7%) for large polyps.<sup>1,2</sup>
- No adverse events for 98.9% of patients, which is comparable to that of CSP for smaller polyps.<sup>3,4</sup>
- The avoidance of electrocautery reduces perforation, post-polypectomy syndrome, and delayed bleeding making CSP a well-established method for resection of polyps <10 mm.
- CSP has the potential to save cost and time as there is no need for electrosurgical generator and hemostatic clip placement. A reduced procedure time has been shown for polyps <10 mm with the potential to be increased for larger polyps.

## Conclusion

*“In conclusion, cold snare resection appears to be a safe and efficacious technique in resection of colorectal polyps  $\geq 10$  mm.”*

*“The results of this systematic review and pooled analysis were excellent with cold snare resection of colorectal polyps >10 mm in terms of post-polypectomy bleeding, complete resection, and residual polyp rates.”*

1. Bronsgeest K, Huisman JF, Langers A, et al. Safety of endoscopic mucosal resection (EMR) of large non-pedunculated colorectal adenomas in the elderly. *Int J Colorectal Dis* 2017; 32: 1711-7.  
2. Elliott TR, Tsiamoulos ZP, Thomas-Gibson S, et al. Factors associated with delayed bleeding after resection of large nonpedunculated colorectal polyps. *Endoscopy* 2018; 50: 790-9.  
3. Horiuchi A, Nakayama Y, Kajiyama M, et al. Removal of small colorectal polyps in anticoagulated patients: a prospective randomized comparison of cold snare and conventional polypectomy. *Gastrointest Endosc* 2014; 79: 417-23.  
4. Repici A, Hassan C, Vitetta E, et al. Safety of cold polypectomy for <10 mm polyps at colonoscopy: a prospective multicenter study. *Endoscopy* 2012; 44: 27-31

# Cold Snare Polypectomy for Non-Pedunculated Colon Polyps Greater Than 1cm

*Cyrus Piraka, Ahmed Saeed, Akbar K. Waljee, Ajish Pillai, Ryan Stidham, and B. Joseph Elmunzer*

## Study Background

- HSP is often used for resection of large polyps and is considered the standard for polyp removal. Complications such as post-polypectomy syndrome, delayed bleeding, and perforation can occur with the use of cautery.
- These adverse events are less likely to occur when using cold snare resection (CSR) due to lack of cautery.
- This study aimed to assess the safety and efficacy of the removal of non-pedunculated colonic polyps >1cm for CSR.

## Results

- No adverse events including post-procedural bleeding or pain requiring hospitalization, perforation, or death were noted. This is far lower than documented results of HSP which were between 12% and 17%.
- 90.3% of cases did not contain residual adenoma tissue.
- No initial polyp under 20mm had residual polyps at follow-up. This supports the data that the resection of small polyps, with the removal of wide margins, can be removed completely with en bloc resection.
- Incomplete resection rate is similar to published HSP data (2% to 40%).
- In this study, cautery was not needed to treat lesions or margins.
- CSR has a potential cost savings. The reduced risk of perforation and/or post-polypectomy syndrome reduces the need for prophylactic clipping, which also reduces procedure time.

## Conclusion

*“In conclusion, this study adds further support to our hypothesis that lift and piecemeal cold snare resection of colon polyps > 1cm is feasible, safe and efficacious.”*

# Cold EMR of Large Sessile Serrated Polyps at Colonoscopy

*Nicholas J. Tutticci and David G. Hewett*

## Study Background

- The ideal technique for removal of sessile serrated polyps (SSPs) is unknown. Traditional HSP is currently recommended for large polyps although this technique is associated with complications such as post-polypectomy bleeding, perforation and pain. Hot EMR also presents the risk of post-polypectomy bleeding or costly clip placement.
- CSP is currently recommended for small polyps (<10mm) with the new data supporting its safety for removal of large polyps (≥10mm).
- This study evaluated the safety and efficacy of cold EMR for large SSPs ≥10mm.

## Results

- All polyps were able to be removed via cold EMR with no need for electrocautery.
- 98.8% of lesions did not contain residual serrated tissue, which was determined by sampling the margin with biopsy forceps (4 bites for polyps <20mm and 6 bites for polyps >20mm).
- Surveillance was completed for 82% of polyps with only one post-polypectomy site (0.6%) having residual serrated tissue at follow-up.
- Incomplete resection rate is significantly lower than published hot polypectomy resection rate data (47%).
- Minor adverse events (minor post-polypectomy bleeding and pain) occurred at similar rates as for CSP for polyps <1cm.
- CSP eliminates the risks associated with the use of electrocautery.

## Conclusion

*“Cold EMR is a safe and effective method for the removal of large SSPs.”*

# Resection of Large Sessile Serrated Polyps by COLD Piecemeal Endoscopic Mucosal Resection: Serrated COLD Piecemeal Endoscopic mucosal resection (SCOPE)

*Rajaratnam Rameshshanker, Zacharias Tsiamoulos, Andrew Latchford, Morgan Moorghen, and Brian P. Saunders*

## Study Background

- SSPs are often located in the thin walled proximal colon. Diathermy from HSP creates the risk of thermal injury, perforation, or post-polypectomy syndrome for this area of the colon.
- Data supports that cold snare polypectomy is “the preferred technique to resect small polyps. It is safe, time efficient, and user friendly.”
- This study evaluated the safety, efficacy, and completeness of serrated cold piecemeal endoscopic mucosal resection (SCOPE) for large SSPs.

## Results

- Follow up examination occurred where complete resection rate was achieved and confirmed in 96.6% of polyps.
- There was no bleeding that required hemostatic techniques.
- No adverse events occurred in this study.



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## Conclusion

*SCOPE is a successful technique for the removal of sessile serrated polyps.*

# Cold Snare Piecemeal Resection of Colonic and Duodenal Polyps $\geq 1\text{cm}$

Neel Choksi, B. Joseph Elmunzer, Ryan W. Stidham, Dmitry Shuster, and Cyrus Piraka

## Study Background

- HSP is considered the standard technique for polyps  $\geq 1\text{cm}$ . Cautery may provide a false sense of security by reducing immediate bleeding, however, it promotes the risk of more significant delayed bleeding.
- CSP is a preferred technique for smaller polyps as it reduces risks associated with perforations from cautery or delayed bleeding. CSP reduces the risk of compromising large arterial vessels making it safer to avoid heat in the removal of large colonic and duodenal polyps.
- This study evaluated the feasibility and safety for CSP of large polyps.

## Results

- No adverse events in 93% of patients.
- CSP reduces, if not eliminates, the risk of perforation as it may not be technically possible to cut through the muscularis propria without cautery.
- Reducing or eliminating delayed bleeding presents potential cost savings such as:
  - » No need for expensive and time-consuming hemostatic clip placement.
  - » Avoids hospitalization, blood transfusions, and repeat endoscopies.
- Cautery (hot forceps or APC) was not needed for treatment of lesions or margins in any of the cases.

## Conclusion

*“Cold snare polypectomy for large duodenal and colonic polyps is technically feasible and may have a favorable safety profile compared to standard electrocautery-based endoscopic resection.”*

*“In addition to the cost savings associated with reduced adverse events, it may obviate the cost and time necessary for the placement of prophylactic hemostatic clips.”*



# Cold Snare Polypectomy for Large Sessile Colonic Polyps: A Single-Center Experience

Thiruvengadam Muniraj, Ara Sahakian, Maria M. Ciarleglio, Yanhong Deng, and Harry R. Aslanian

## Study Background

- Colonoscopy is a procedure which can help prevent colorectal cancer.
- SSPs are often located in the proximal colon and are challenging to see and remove completely using traditional polypectomy snares.
- Complications in traditional HSP are reported in up to 10% of procedures.
- Data supports that CSP “is safe and effective and requires less time than the performance of snare cautery” for diminutive and small polyps.
- This study evaluated CSP for SSP  $\geq 10\text{mm}$  for acceptable rate of residual polyp on follow-up and any adverse events.

## Results




- Complete resection rate was achieved in 80% of the 27/30 patients that had follow-up within 6 months.
- Polyp retrieval rate was 100%.
- No adverse events occur in this study.
- Electrocautery is not used in CSP therefore there was no immediate bleeding that required hemostatic techniques.
- Thermal injury, perforation, or post-polypectomy syndrome did not occur.

## Conclusion

*“CSP appears to be a safe and effective technique for resection of large sessile polyps  $\geq 10\text{mm}$ .”*

# Video Resources

Scan the QR codes below to watch:

Physician	Procedure Focus	QR Code
Dr. Akira Horiuchi	2cm piecemeal resection of sessile serrated polyp	
Dr. Cyrus Piraka	5cm laterally spreading tubulovillous adenoma	
Dr. Siddharth Javia & Krishnavel Chathadi	6cm duodenal adenoma	

Scan the QR code to learn more about the Exacto cold snare.



# References:

Publication	Study Information	Focus
Endoscopy International Open March 2017	<a href="#">Cold Snare Polypectomy for Non-Pedunculated Colon Polyps Greater Than 1cm</a> Authors: C. Piraka, A. Saeed	Cold Resection Polyps > 10mm
Gastroenterology Research and Practice 2015	<a href="#">Cold Snare Polypectomy for Large Sessile Colonic Polyps: A Single-Center Experience</a> Authors: T. Muniraj, A. Sahakian, M. Ciarleglio, Y. Deng, and H. R. Aslanian	Cold Resection Sessile Serrated Polyps >10mm
GIE May 2014	<a href="#">Cold Snare Resection of a Non-polypoid Lesion &gt; 45mm</a> Authors: R. Barros, M. Monteverde, R. F. Barros, A. Barros	Cold Resection Polyp > 45mm
Gastroenterology Latin America April 2014	<a href="#">Seguridad de la Reseccion Con asa Fria de Lesions Colorrectales no Polipoideas (0-Ila y 0-Ilb) de hasta 20mm</a> Authors: R. Barros, M. Monteverde, R. F. Barros, S.Elizalde, A. Barros	Cold Resection Polyps < 20mm
GIE May 2019	<a href="#">Cold Snare Endoscopic Resection of Nonpedunculated Colorectal Polyps Larger Than 10 mm: A Systematic Review and Pooled-Analysis</a> Authors: V. Chandrasekar, M. Spadaccini	Cold Resection Polyps >10mm
Endoscopy 2019	<a href="#">Cold Snare Piecemeal Endoscopic Mucosal Resection of a Very Large Duodenal Adenoma</a> Authors: S. B. Javia, K. Chathadi	Cold Resection Polyp 60mm
GIE March 2018	<a href="#">Cold EMR of Large Sessile Serrated Polyps at Colonoscopy</a> Authors: N. Tutticii, D. Hewett	Cold Resection Sessile Serrated Polyps >10mm
Endoscopy 2018	<a href="#">Resection of Large Sessile Serrated Polyps by Cold Piecemeal Endoscopic Mucosal Resection: Serrated Cold Piecemeal Endoscopic Mucosal Resection (SCOPE)</a> Authors: R. Rameshshanker, Z. Tsiamoulos, A. Latchford, M. Moorghen, and B. P. Saunders	Cold Resection Sessile Serrated Polyps > 10mm
International Journal of Colorectal Disease 2017	<a href="#">Safety of Endoscopic Mucosal Resection (EMR) of Large Non-Pedunculated Colorectal Adenomas in the Elderly</a> Authors: K. Bronsgeest, J. F. Huisman, A. Langers, J. J. Boonstra, B. E. Schenk, W. H., H. F. A. Vasen, J. C. H. Hardwick	Resection Polyps ≥ 20mm
Endoscopy 2018	<a href="#">Factors Associated with Delayed Bleeding After Resection of Large Non-Pedunculated Colorectal Polyps</a> T. Elliott, Z. Tsiamoulos, S. Thomas-Gibson 1, N.Suzuki, L. A. Bourikas, A. Hart, P. Bassett, B. P. Saunders	Resection Polyps > 20mm
GIE October 2013	<a href="#">Removal of Small Colorectal Polyps in Anticoagulated Patients: A Prospective Randomized Comparison of Cold Snare and Conventional Polypectomy</a> A. Horiuchi, Y. Nakayama, M. Kajiyama, N. Tanaka, K. Sano, D. Y. Graham	Resection Polyps < 10mm
Endoscopy 2012	<a href="#">Safety of Cold Polypectomy for &lt; 10 mm Polyps at Colonoscopy: A Prospective Multicenter Study</a> A. Repici, C. Hassan, E. Vitetta, E. Ferrara, G. Manes, G. Gullotti, A. Princiotta, P. Dulbecco, N. Gaffuri, E. Bettoni, N. Pagano, G. Rando, G. Strangio, A. Carlino, F. Romeo, D. de Paula Pessoa Ferreira, A. Zullo, L. Ridola, A. Malesci	Cold Resection Polyps < 10mm
Endoscopy International Open March 2015	<a href="#">Cold Snare Piecemeal Resection of Colonic and Duodenal Polyps ≥1 cm</a> Authors: N. Choksi, B. J. Elmunzer, R.W. Stidham, D. Shuster, and C. Piraka	Cold Resection Polyps ≥10mm
Gastrointestinal Endoscopy 2015	<a href="#">Prospective, Randomized Comparison of 2 Methods of Cold Snare Polypectomy for Small Colorectal Polyps</a> Authors: A. Horiuchi, K. Hosoi	Cold Resection Polyps < 10mm
Digestive Endoscopy 2015	<a href="#">Cold Snare Polypectomy: Does Snare Type Influence Outcomes?</a> Authors: S. Dinn, A. Ball	Cold Resection Polyps < 10mm
Gastrointestinal Endoscopy 2015	<a href="#">Cold Snare Polypectomy: Optimizing Technique and Technology</a> Authors: D. Hewett	Cold Resection Polyps < 10mm
Gastrointestinal Endoscopy 2020	<a href="#">Endoscopic Removal of Colorectal Lesions – Recommendations by the US Multi-Society Task Force on Colorectal Cancer</a> Authors: T. Kaltenbach, J. Anderson, C. Burke, J. Dominitz, S. Gupta, D. Liberman, D. Robertson, A. Shaukat, S. Syngal, D. Rex	Guidelines
European Society of Gastrointestinal Endoscopy (ESGE) 2017	<a href="#">Colorectal Polypectomy and Endoscopic Mucosal Resection (EMR)</a> Authors: M. Ferlitsch, A. Moss, C. Hassan, P. Bhandari	Guidelines
YouTube 2016	<a href="#">Cold Snare Polypectomy with Follow Up</a> Author: C. Piraka	Cold Resection Polyp 50mm
YouTube 2020	<a href="#">Exacto Cold Snare - Cold, Piecemeal Resection (Dr. Horiuchi Case)</a> Courtesy of A. Horiuchi	Cold Resection Polyp 20mm



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