

# Comparison of Endoscopic Mucosal Resection of large colorectal polyps with or without thermal ablation of the resection base and margins

Roupen Djinbachian<sup>1,2</sup>, Heiko Pohl<sup>3,4</sup>, Douglas K Rex<sup>5</sup>, John M. Levenick<sup>6</sup>, Douglas Pleskow<sup>7</sup>, Michael B Wallace<sup>8</sup>, Mouen A Khashab<sup>9</sup>, Ajaypal Singh<sup>10</sup>, Joshua Melson<sup>11</sup>, Dennis Yang<sup>12</sup>, Aleksandar Gavrič<sup>13</sup>, MD, Daniel von Renteln<sup>1,2</sup>

<sup>1</sup>Division of Gastroenterology, Montreal University Hospital Center (CHUM), Montreal, Canada

<sup>2</sup>Division of Gastroenterology, Montreal University Hospital Research Center (CRCHUM), Montreal, Canada

<sup>3</sup>Dartmouth Geisel School of Medicine, Hanover, New Hampshire, USA

<sup>4</sup>Division of Gastroenterology, VA Medical Center, Whiter River Junction, Vermont, USA

<sup>5</sup>Indiana University School of Medicine, Indianapolis, Indiana, USA

<sup>6</sup>Penn State Hershey Medical Center and Penn State College of Medicine, Hershey, Pennsylvania, USA

<sup>7</sup>Division of Gastroenterology Beth Israel Deaconess Medical Center, Boston, Massachusetts, USA

<sup>8</sup>Division of Gastroenterology and Hepatology, Mayo Clinic Jacksonville, Jacksonville, Florida, USA

<sup>9</sup>Division of Gastroenterology and Hepatology, Johns Hopkins Hospital, Baltimore, Maryland, USA

<sup>10</sup>Division of Digestive Diseases and Nutrition, Rush University Medical Center, Chicago, Illinois, USA

<sup>11</sup>Division of Gastroenterology, University of Arizona-Banner University Medical Center, USA

<sup>12</sup>Center for Interventional Endoscopy, AdventHealth Orlando, Orlando, USA

<sup>13</sup>Division of Gastroenterology and Hepatology, University Medical Centre, Ljubljana, Slovenia

E-mail: aleksandar.gavri@gmail.com

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## ABSTRACT

**Background:** Large non-pedunculated colorectal polyps are commonly removed using endoscopic mucosal resection (EMR). EMR combined with ablation of the resection margin significantly reduces recurrence rate. It is unclear which margin ablation technique yields lowest post-EMR recurrence rates. This study compared local recurrence rate (LRR) after EMR using different ablation techniques.

**Methods:** A retrospective analysis was performed from prospectively collected EMR databases that enrolled 18–89-year-old patients undergoing hot EMR of  $\geq 20$  mm non-pedunculated polyps between 2018 and 2023, who had at least one follow-up colonoscopy. We compared recurrence rates after EMR without margin ablation, ablation of the margin alone, and ablation of the margin and the defect base. The pri-

mary outcome was histologic LRR at the first surveillance colonoscopy.

**Results:** 391 patients with 427 LNPCPs were included. EMR was performed in 144 cases without ablation, 170 with margin ablation, 113 with margin+base ablation. LRRs were significantly lower in the margin+base ablation group (0.9%) compared with the margin ablation group (8.8%;  $p = 0.005$ ), and no ablation group (23.4%;  $p = 0.001$ ). LRRs for lesions  $\geq 40$ mm were significantly lower for the margin+base ablation group compared with the margin ablation and no ablation group (2.4 vs 12.5 vs 28.1%;  $p = 0.005$ ). Bleeding rates were similar across all groups (2.1%; 1.9%; 3.0% for margin+base, margin, and no ablation respectively). 1 perforation was observed in the margin+base ablation group, and 2 in the no ablation group.

**Conclusion:** Margin and base ablation resulted in almost no recurrence (< 1%) compared to all other modalities. Margin ablation alone significantly reduced LRR compared to no ablation. A randomized controlled trial should follow to confirm the results observed for margin and base ablation.