

# Improving practicality of radiofrequency ablation for eradication of Barrett's mucosa: A randomized trial comparing three different treatment regimens for circumferential ablation using the HALO360 System.

Gepubliceerd: 03-09-2010 Laatste bijgewerkt: 13-12-2022

The simplified HALO360 ablation regimen result in an easier and faster ablation procedure, while maintaining efficacy and safety.

<b>Ethische beoordeling</b>	Positief advies
<b>Status</b>	Werving gestart
<b>Type aandoening</b>	-
<b>Onderzoekstype</b>	Interventie onderzoek

## Samenvatting

### ID

NL-OMON21516

### Bron

Nationaal Trial Register

### Aandoening

Barrett's esophagus; Barrett's dysplasia; early Barrett's neoplasia; radiofrequency ablation; endoscopy; Intestinal metaplasia; intraepithelial neoplasia.

### Ondersteuning

**Primaire sponsor:** AMC Amsterdam

**Overige ondersteuning:** BARRX Medical, Sunnyvale, CA, USA. (material support)

### Onderzoeksproduct en/of interventie

## **Uitkomstmaten**

### **Primaire uitkomstmaten**

Percentage of endoscopically visual surface regression of BE epithelium at 3 months as scored by two endoscopists blinded to the treatment regimen by using endoscopic images of the Barrett's esophagus prior to and 3 months after the first treatment session (e.g. 80% of the Barrett's epithelium in regression). And, by using standardized case record forms on which the size and aspect of the Barrett's esophagus prior to and after the first treatment session are registered.

## **Toelichting onderzoek**

### **Achtergrond van het onderzoek**

Three different protocols for the initial balloon-based circumferential radiofrequency ablation treatment will be compared. One regimen is the standard currently used regimen, two other regimens are simplified regimens.

### **Doel van het onderzoek**

The simplified HALO360 ablation regimen result in an easier and faster ablation procedure, while maintaining efficacy and safety.

### **Onderzoeksopzet**

Primary outcome is scored 3 months after RFA. Secondary outcomes are scored during and after the RFA procedure.

### **Onderzoeksproduct en/of interventie**

Circumferential balloon-based endoscopic radiofrequency ablation using the HALO system for Barrett's early neoplasia. These treatment sessions take approximally 30-60 minutes.

Treatment protocol: HALO360 procedure:

The esophagus is evaluated using white light (WL) high-resolution endoscopy and narrow band imaging (NBI). The extent of columnar lined esophagus is documented according to the Prague C&M classification and the number and localization of islands of Barrett's are noted. A pullback video recording (WL+NBI) of the Barrett's segment is obtained. If this is not possible, still images (WL+NBI) for every cm of the BE while pulling back from the top of the gastric

folds (TGF). Patients are subsequently randomized to circumferential ablation with the HALO360 system using the simplified or the standard ablation regimen.

#### Standard HALO360 ablation regimen:

After mapping and randomization, the Barrett's segment is flushed with the mucolytic agent acetylcysteine (1%) followed by flushing with tap water. Subsequently, a guide wire is inserted into the duodenum and the endoscope is removed. A non-compliant sizing balloon (BÂRRX Medical, Sunnyvale, CA) is then introduced over the guide wire and positioned 4 cm above the proximal margin of BE. The balloon is then automatically inflated to 4 psi (0.28 atm) and the internal esophageal diameter is automatically calculated based on baseline balloon volume/geometry and the inflated pressure/volume. Sizing is repeated moving distally, for every 1 cm of BE until the transition to cardia is detected by a rapid increase in calculated diameter. After previous ER, the advice is to use an ablation catheter that is one step smaller in diameter than the diameter advised by the sizing procedure. After the ablation catheter has been introduced over the guide wire, the endoscope is introduced and under visual control the BE is ablated at an energy level of 12 J/cm<sup>2</sup> at 300 Watt with working proximal to distal using visual repositioning. A small overlap (i.e. <1cm) between ablation zones is allowed. The endoscope is removed followed by removal of the ablation catheter and the guide wire. Before the second ablation pass, the coagulum is cleaned off the balloon catheter. The endoscope is reintroduced to irrigate and suction the ablation zone. A distal attachment cap will be attached to the tip of the endoscope to gently wipe of the coagulum from the ablated segment. After irrigating and suctioning the debris away as much as possible, the ablation zone is cleaned by forcefully flushing water through a spraying catheter. The stomach is emptied and deflated and the endoscope is removed, after reintroduction of the guide wire. The ablation catheter is reintroduced over the guide wire to repeat the ablation, after reintroduction of the endoscope to allow for ablation under vision. After this second ablation no additional cleaning of the ablation zone is required. First, the endoscope is removed, followed by careful removal of the ablation catheter.

#### Simple HALO360 ablation regimen 1:

In the simplified ablation regimen 1 flushing with the mucolytic agent acetylcysteine (1%) is not performed, but the esophageal wall will be flushed with water through the flushing channel of the endoscope. Pre-RFA sizing, selection of the appropriate ablation balloon, and the first ablation pass are performed according to the guidelines description above. After the first ablation the ablation balloon is not removed but advanced distally into the stomach. The treated surface is cleaned by pushing of the debris with the distal cap, which has been attached to the endoscope before ablation. No high-pressure flushing is performed after cleaning the ablation zone with the cap. After cleaning of the treatment area, a second ablation at 12 J/cm<sup>2</sup> at 300 Watt is performed.

## Simple HALO360 ablation regimen 2:

In the simplified ablation regimen 2 flushing with the mucolytic agent acetylcysteine (1%) is not performed, but the esophageal wall will be flushed with water through the flushing channel of the endoscope. Pre-RFA sizing and selection of the appropriate ablation balloon, are performed according to the guidelines description above. The ablation is not done in two passes but in one pass. Ablation will be performed twice at the same level, followed by moving the balloon distally to the consecutive ablation zone which is ablated twice too. After ablating the whole Barrett's segment, the endoscope will be removed followed by the balloon and guidewire. This regimen is even faster than regimen1. Only one pass with the ablation balloon has been done.

## Contactpersonen

### Publiek

Academic Medical Center<br>  
Bldg. C2-210, Meibergdreef  
J.J.G.H.M. Bergman  
Amsterdam 1105 AZ  
The Netherlands  
+31 (0)20 5669111

### Wetenschappelijk

Academic Medical Center<br>  
Bldg. C2-210, Meibergdreef  
J.J.G.H.M. Bergman  
Amsterdam 1105 AZ  
The Netherlands  
+31 (0)20 5669111

## Deelname eisen

### Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Scheduled HALO360 ablation for BE with flat low-grade dysplasia (LGD) or high-grade dysplasia (HGD) or for BE (with or without neoplasia) after prior endoscopic resection (ER) for lesions containing HGD or and early cancer;

2. Review of histopathology specimens by a local expert pathologist;
3. Written informed consent.

## **Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)**

1. In case of prior ER: A specimen showing carcinoma with positive vertical resection margins, deep submucosal invasion ( $\geq T1sm2$ ), poorly or undifferentiated cancer (G3 or G4), or lymphatic/vascular invasion;
2. Patients unable to give informed consent.

## **Onderzoeksopzet**

### **Opzet**

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Gerandomiseerd
Blinding:	Dubbelblind
Controle:	Actieve controle groep

### **Deelname**

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	01-12-2008
Aantal proefpersonen:	60
Type:	Verwachte startdatum

## **Ethische beoordeling**

Positief advies	
Datum:	03-09-2010
Soort:	Eerste indiening

## Registraties

### Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

### Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

### In overige registers

Register	ID
NTR-new	NL2388
NTR-old	NTR2495
Ander register	METC AMC : 08/272
ISRCTN	ISRCTN wordt niet meer aangevraagd.

## Resultaten

### Samenvatting resultaten

N/A