

Barrett's oesophagus: ablative therapy for the treatment of Barrett's oesophagus

Clinical review methods

1) Inclusion/ Exclusion criteria

Inclusion criteria

- **Population:** Adults (age 18 and older) with a diagnosis of Barrett's oesophagus with high-grade dysplasia or with intramucosal cancer (including T1a).
- **Intervention:** endoscopic resection and ablative therapies [argon plasma coagulation (APC), photodynamic therapy (PDT), laser ablation, multipolar electrocoagulation (MPEC), radiofrequency ablation (RFA)]
- **Comparators:** oesophageal surgery or surveillance with proton-pump inhibitors
- **Study Design:** RCTs, observational studies and case series.

Exclusion criteria

- **Population:**
 - a) Children (younger than 18),
 - b) Adults with a diagnosis of Barrett's oesophagus with no dysplasia or with low-grade dysplasia.
 - c) Adults with other gastrointestinal conditions, including gastro-oesophageal reflux disease.
 - d) Studies with a heterogeneous population with less than 50% being HGD and/or intramucosal cancer (including T1a).
- **Intervention:**
 - a) Diagnosis and assessment of Barrett's oesophagus.
 - b) Other forms of management for Barrett's oesophagus, including oesophageal surgery, unless they are being used as comparators for the ablative therapies.

- c) Diagnosis and treatment of gastro-oesophageal reflux disease.
- d) Treatment of dyspepsia.
- **Comparators:** Comparators other than oesophageal surgery or surveillance.
- **Study Design:** Individual case reports

2) Evidence review results

1.1 *Systematic reviews*

- initial 238 hits including duplicates
- 42 selected based on title and abstract for background reading and reference checking

1.2 *Evidence map*

- initial 988 hits including duplicates
- 197 selected based on title and abstract
- also daisy chained from the included and excluded reviews so 24 studies added
- 221 ordered full text

Additional EMR and early cancer terms added for a new search

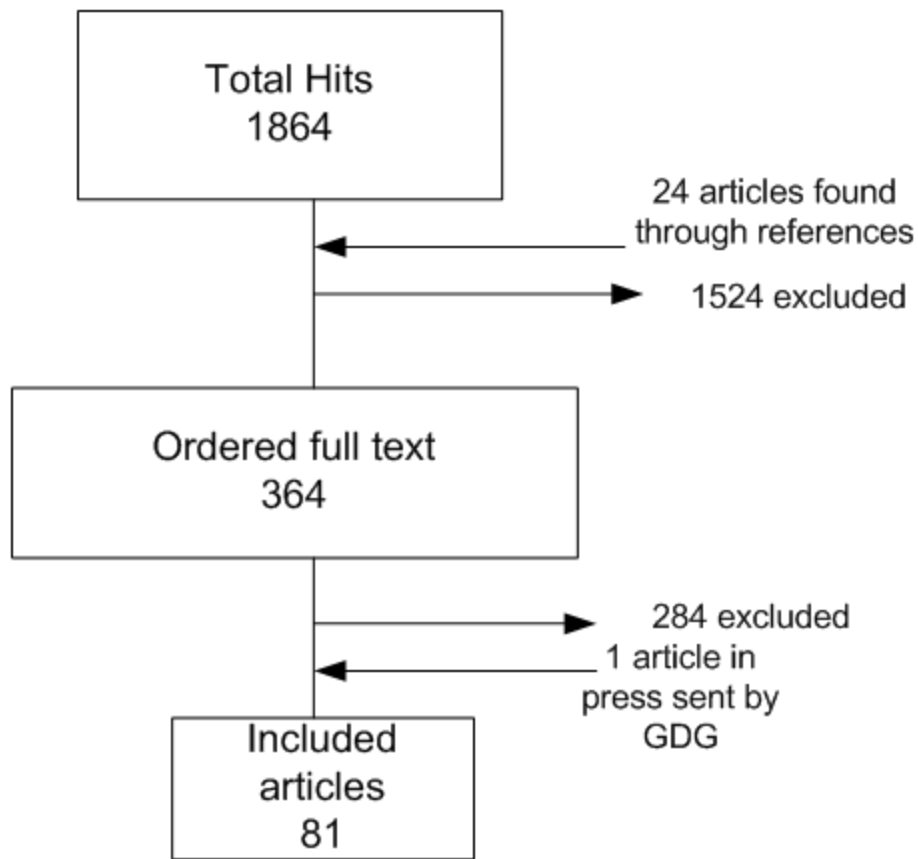
- initial 900 hits including duplicates
- 757 excluded based on title and abstract
- 143 ordered for full text.
- Additional reference – article in press sent by the GDG

Overall papers ordered: 364

Articles excluded on full text: 284

Included articles: 81

Figure 1: The systematic review PRISMA flow chart



Evidence found:

- Number of RCTs included: 2
 - Overholt, 2005;2007 – PDT+ omeprazole versus omeprazole
 - Shaheen, 2009 – RFA versus Sham procedure
- Number of two arm observational studies included: 7
 - Das, 2008 – Endotherapies versus surgery
 - Greenstein, 2008 – Endotherapies versus no therapy
 - Pacifico, 2003 – ER+PDT versus surgery
 - Prasad, 2007 – PDT versus surgery
 - Prasad, 2009 – Endotherapies versus surgery
 - Reed, 2005 – ER+PDT versus surgery and observation
 - Schembre, 2008 - Endotherapies versus surgery
- Number of case series/ single arm registry data included: 72

Included studies

Ackroyd R, Brown NJ, Davis MF et al. (1999) Aminolaevulinic acid-induced photodynamic therapy in the treatment of dysplastic Barrett's oesophagus and adenocarcinoma. *Lasers in Medical Science* 14: 278-85.

Attwood SEA, Lewis CJ, Caplin S et al. (2003) Argon beam plasma coagulation as therapy for high-grade dysplasia in Barrett's esophagus. *Clinical Gastroenterology and Hepatology* 1: 258-63.

Ban S, Mino M, Nishioka NS et al. (2004) Histopathologic aspects of photodynamic therapy for dysplasia and early adenocarcinoma arising in Barrett's esophagus. *American Journal of Surgical Pathology* 28: 1466-73.

Barr H, Shepherd NA, Dix A et al. (1996) Eradication of high-grade dysplasia in columnar-lined (Barrett's) oesophagus by photodynamic therapy with endogenously generated protoporphyrin IX. *Lancet* 348: 584-5.

Beaumont H, Gondrie JJ, McMahon BP et al. (2009) Stepwise radiofrequency ablation of Barrett's esophagus preserves esophageal inner diameter, compliance, and motility. *Endoscopy* 41: 2-8.

Behrens A, May A, Gossner L et al. (2005) Curative treatment for high-grade intraepithelial neoplasia in Barrett's esophagus. *Endoscopy* 37: 999-1005.

Buttar NS, Wang KK, Lutzke LS et al. (2001) Combined endoscopic mucosal resection and photodynamic therapy for esophageal neoplasia within Barrett's esophagus. *Gastrointestinal Endoscopy* 54: 682-8.

Conio M, Repici A, Cestari R et al. (2005) Endoscopic mucosal resection for high-grade dysplasia and intramucosal carcinoma in Barrett's esophagus: an Italian experience. *World Journal of Gastroenterology* 11: 6650-5.

Craig C, Gray J, Macpherson M et al. (2007) Porfimer sodium photodynamic therapy in the treatment of early oesophageal carcinoma. *Photodiagnosis and Photodynamic Therapy* 4: 244-8.

Das A, Singh V, Fleischer DE et al. (2008) A comparison of endoscopic treatment and surgery in early esophageal cancer: an analysis of surveillance epidemiology and end results data. *Am.J Gastroenterol.* 103: 1340-5.

Ell C, May A, Pech O et al. (2007) Curative endoscopic resection of early esophageal adenocarcinomas (Barrett's cancer). *Gastrointestinal Endoscopy* 65: 3-10.

Ell C, May A, Gossner L et al. (2000) Endoscopic mucosal resection of early cancer and high-grade dysplasia in Barrett's esophagus. *Gastroenterology* 118: 670-7.

Etienne J, Dorme N, Bourg-Heckly G et al. (2004) Photodynamic therapy with green light and m-tetrahydroxyphenyl chlorin for intramucosal adenocarcinoma and high-grade dysplasia in Barrett's esophagus. *Gastrointestinal Endoscopy* 59: 880-9.

Filonenko EV, Sokolov VV, Chissov VI et al. (2008) Photodynamic therapy of early esophageal cancer. *Photodiagnosis and Photodynamic Therapy* 5: 187-90.

Foroulis CN, Thorpe JA (2006) Photodynamic therapy (PDT) in Barrett's esophagus with dysplasia or early cancer. *European Journal of Cardio-Thoracic Surgery* 29: 30-4.

Ganz RA, Overholt BF, Sharma VK et al. (2008) Circumferential ablation of Barrett's esophagus that contains high-grade dysplasia: a U.S. Multicenter Registry. *Gastrointestinal Endoscopy* 68: 35-40.

Gill KRS, Wolfsen HC, Preyer NW et al. (2009) Pilot study on light dosimetry variables for photodynamic therapy of Barrett's esophagus with high-grade dysplasia. *Clinical Cancer Research* 15: 1830-6.

Giovannini M, Bories E, Pesenti C et al. (2004) Circumferential endoscopic mucosal resection in Barrett's esophagus with high-grade intraepithelial neoplasia or mucosal cancer. Preliminary results in 21 patients. *Endoscopy* 36: 782-7.

Gondrie JJ, Pouw RE, Sondermeijer CM et al. (2008) Effective treatment of early Barrett's neoplasia with stepwise circumferential and focal ablation using the HALO system. *Endoscopy* 40: 370-9.

Gondrie JJ, Pouw RE, Sondermeijer CM et al. (2008) Stepwise circumferential and focal ablation of Barrett's esophagus with high-grade dysplasia: results of the first prospective series of 11 patients. *Endoscopy* 40: 359-69.

Gossner L, May A, Sroka R et al. (1999) A new long-range through-the-scope balloon applicator for photodynamic therapy in the esophagus and cardia. *Endoscopy* 31: 370-6.

Gossner L, May A, Stolte M et al. (1999) KTP laser destruction of dysplasia and early cancer in columnar-lined Barrett's esophagus. *Gastrointestinal Endoscopy* 49: 8-12.

Gossner L, Stolte M, Sroka R et al. (1998) Photodynamic ablation of high-grade dysplasia and early cancer in Barrett's esophagus by means of 5-aminolevulinic acid. *Gastroenterology* 114: 448-55.

Greenstein AJ, Wisnivesky JP, Litle VR (2008) Effect of local therapy for the treatment of superficial esophageal cancer in non-operative candidates. *Diseases of the Esophagus* 21: 673-8.

Inoue H (1998) Endoscopic mucosal resection for esophageal and gastric mucosal cancers. *Can J Gastroenterol* 12: 355-9.

Inoue H, Endo M, Takeshita K et al. (1991) Endoscopic resection of early-stage esophageal cancer. *Surgical Endoscopy* 5: 59-62.

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Keeley SB, Pennathur A, Gooding W et al. (2007) Photodynamic therapy with curative intent for Barrett's esophagus with high grade dysplasia and superficial esophageal cancer. *Annals of Surgical Oncology* 14: 2406-10.

Larghi A, Lightdale CJ, Ross AS et al. (2007) Long-term follow-up of complete Barrett's eradication endoscopic mucosal resection (CBE-EMR) for the treatment of high grade dysplasia and intramucosal carcinoma. *Endoscopy* 39: 1086-91.

Laukka MA, Wang KK (1995) Initial results using low-dose photodynamic therapy in the treatment of Barrett's esophagus. *Gastrointestinal Endoscopy* 42: 59-63.

Lopes CV, Hela M, Pesenti C et al. (2007) Circumferential endoscopic resection of Barrett's esophagus with high-grade dysplasia or early adenocarcinoma. *Surgical Endoscopy* 21: 820-4.

Lovat LB, Jamieson NF, Novelli MR et al. (2005) Photodynamic therapy with m-tetrahydroxyphenyl chlorin for high-grade dysplasia and early cancer in Barrett's columnar lined esophagus. *Gastrointestinal Endoscopy* 62: 617-23.

Mackenzie GD, Jamieson NF, Novelli MR et al. (2008) How light dosimetry influences the efficacy of photodynamic therapy with 5-aminolaevulinic acid for ablation of high-grade dysplasia in Barrett's esophagus. *Lasers in Medical Science* 23: 203-10.

Manner H, May A, Rabenstein T et al. (2007) Prospective evaluation of a new high-power argon plasma coagulation system (hp-APC) in therapeutic gastrointestinal endoscopy. *Scandinavian Journal of Gastroenterology* 42: 397-405.

Manner H, May A, Faerber M et al. (2006) Safety and efficacy of a new high power argon plasma coagulation system (hp-APC) in lesions of the upper gastrointestinal tract. *Digestive and Liver Disease* 38: 471-8.

Mathus-Vliegen EMH, Tytgat GNJ (1990) Analysis of failures and complications of neodymium:YAG laser photocoagulation in gastrointestinal tract tumors. A retrospective survey of 8 years' experience. *Endoscopy* 22: 17-23.

May A, Gossner L, Pech O et al. (2002) Intraepithelial high-grade neoplasia and early adenocarcinoma in short-segment Barrett's esophagus (SSBE): curative treatment using local endoscopic treatment techniques. *Endoscopy* 34: 604-10.

May A, Gossner L, Pech O et al. (2002) Local endoscopic therapy for intraepithelial high-grade neoplasia and early adenocarcinoma in Barrett's oesophagus: Acute-phase and intermediate results of a new treatment approach. *European Journal of Gastroenterology and Hepatology* 14: 1085-91.

May A, Gossner L, Gunter E et al. (1999) Local treatment of early cancer in short Barrett's esophagus by means of argon plasma coagulation: initial experience. *Endoscopy* 31: 497-500.

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Mino-Kenudson M, Brugge WR, Puricelli WP et al. (2005) Management of superficial Barrett's epithelium-related neoplasms by endoscopic mucosal resection: clinicopathologic analysis of 27 cases. *American Journal of Surgical Pathology* 29: 680-6.

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Overholt BF, Wang KK, Burdick JS et al. (2007) Five-year efficacy and safety of photodynamic therapy with Photofrin in Barrett's high-grade dysplasia. *Gastrointest Endosc* 66: 460-8.

Overholt BF, Panjehpour M, Halberg DL (2003) Photodynamic therapy for Barrett's esophagus with dysplasia and/or early stage carcinoma: long-term results. *Gastrointest Endosc* 58: 183-8.

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- Overholt BF, Lightdale CJ, Wang KK et al. (2005) Photodynamic therapy with porfimer sodium for ablation of high-grade dysplasia in Barrett's esophagus: International, partially blinded, randomized phase III trial. *Gastrointestinal Endoscopy* 62: 488-98.
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- Peters F, Kara M, Rosmolen W et al. (2005) Poor results of 5-aminolevulinic acid-photodynamic therapy for residual high-grade dysplasia and early cancer in Barrett's esophagus after endoscopic resection. *Endoscopy* 37: 418-24.
- Peters FP, Kara MA, Rosmolen WD et al. (2005) Endoscopic treatment of high-grade dysplasia and early stage cancer in Barrett's esophagus. *Gastrointestinal Endoscopy* 61: 506-14.
- Peters FP, Kara MA, Curvers WL et al. (2007) Multiband mucosectomy for endoscopic resection of Barrett's esophagus: Feasibility study with matched historical controls. *European Journal of Gastroenterology and Hepatology* 19: 311-5.
- Peters FP, Kara MA, Rosmolen WD et al. (2006) Stepwise radical endoscopic resection is effective for complete removal of Barrett's esophagus with early neoplasia: a prospective study. *American Journal of Gastroenterology* 101: 1449-57.
- Pouw RE, Gondrie JJ, Rygiel AM et al. (2009) Properties of the Neosquamous Epithelium After Radiofrequency Ablation of Barrett's Esophagus Containing Neoplasia. *American Journal of Gastroenterology* 104: 1366-73.
- Pouw RE, Peters FP, Sempoux C et al. (2008) Stepwise radical endoscopic resection for Barrett's esophagus with early neoplasia: report on a Brussels' cohort. *Endoscopy* 40: 892-8.
- Prasad GA, Wu TT, Wigle DA et al. (2009) Endoscopic and Surgical Treatment of Mucosal (T1a) Esophageal Adenocarcinoma in Barrett's Esophagus. *Gastroenterology* 137: 815-23.
- Prasad GA, Wang KK, Joyce AM et al. (2007) Endoscopic therapy in patients with Barrett's esophagus and portal hypertension. *Gastrointestinal Endoscopy* 65: 527-31.
- Prasad GA, Wang KK, Buttar NS et al. (2007) Long-term survival following endoscopic and surgical treatment of high-grade dysplasia in Barrett's esophagus. *Gastroenterology* 132: 1226-33.
- Prasad GA, Wang KK, Buttar NS et al. (2007) Predictors of stricture formation after photodynamic therapy for high-grade dysplasia in Barrett's esophagus. *Gastrointestinal Endoscopy* 65: 60-6.
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- Roos E, Pouw, Katja, W, Pierre, E et al. (2010) Efficacy of Radiofrequency Ablation Combined With Endoscopic Resection for Barrett's Esophagus With Early Neoplasia. *Clinical*

gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association 8 (1):23-29 (Abstract).

Sampliner RE, Camargo E, Prasad AR (2006) Association of ablation of Barrett's esophagus with high grade dysplasia and adenocarcinoma of the gastric cardia. *Diseases of the Esophagus* 19: 277-9.

Schembre DB, Huang JL, Lin OS et al. (2008) Treatment of Barrett's esophagus with early neoplasia: a comparison of endoscopic therapy and esophagectomy. *Gastrointestinal Endoscopy* 67: 595-601.

Seewald S, Akaraviputh T, Seitz U et al. (2003) Circumferential EMR and complete removal of Barrett's epithelium: a new approach to management of Barrett's esophagus containing high-grade intraepithelial neoplasia and intramucosal carcinoma. *Gastrointestinal Endoscopy* 57: 854-9.

Shaheen NJ, Sharma P, Overholt BF et al. (2009) Radiofrequency ablation in Barrett's esophagus with dysplasia. *N.Engl.J Med.* 360: 2277-88.

Sharma P, Jaffe P, Bhattacharyya A (2000) Fate of high grade dysplasia at 1 year after endoscopic ablation with Nd:YAG laser and electrocautery. *Am.J Gastroenterol* 95: 79-82.

Sharma P, Jaffe PE, Bhattacharyya A et al. (1999) Laser and multipolar electrocoagulation ablation of early Barrett's adenocarcinoma: long-term follow-up. *Gastrointestinal Endoscopy* 49: t-6.

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Smith CD, Bejarano PA, Melvin WS et al. (2007) Endoscopic ablation of intestinal metaplasia containing high-grade dysplasia in esophagectomy patients using a balloon-based ablation system. *Surgical Endoscopy* 21: 560-9.

Soehendra N, Binmoeller KF, Bohnacker S et al. (1997) Endoscopic snare mucosectomy in the esophagus without any additional equipment: a simple technique for resection of flat early cancer. *Endoscopy* 29: 380-3.

Soehendra N, Seewald S, Groth S et al. (2006) Use of modified multiband ligator facilitates circumferential EMR in Barrett's esophagus (with video){A figure is presented}{A figure is presented}. *Gastrointestinal Endoscopy* 63: 847-52.

Thomas T, Singh R, Ragnunath K (2009) Trimodal imaging-assisted endoscopic mucosal resection of early Barrett's neoplasia. *Surgical Endoscopy* 23: 1609-13.

van Hillegersberg R., Haringsma J, Ten Kate FJ et al. (2003) Invasive carcinoma after endoscopic ablative therapy for high-grade dysplasia in Barrett's oesophagus. *Digestive Surgery* 20: 440-4.

Van Laethem JL, Jagodzinski R, Peny MO et al. (2001) Argon plasma coagulation in the treatment of Barrett's high-grade dysplasia and in situ adenocarcinoma. *Endoscopy* 33: 257-61.

Weiss AA, Wiesinger HA, Owen D (2006) Photodynamic therapy in Barrett's esophagus: results of treatment of 17 patients. *Canadian Journal of Gastroenterology* 20: 261-4.

Weston AP, Sharma P (2002) Neodymium:yttrium-aluminum garnet contact laser ablation of Barrett's high grade dysplasia and early adenocarcinoma. *American Journal of Gastroenterology* 97: 2998-3006.

Wolfsen HC, Hemminger LL, Wallace MB et al. (2004) Clinical experience of patients undergoing photodynamic therapy for Barrett's dysplasia or cancer. *Alimentary Pharmacology & Therapeutics* 20: 1125-31.

Wolfsen HC, Hemminger LL, Raimondo M et al. (2004) Photodynamic therapy and endoscopic mucosal resection for Barrett's dysplasia and early esophageal adenocarcinoma. *Southern Medical Journal* 97: 827-30.

Wolfsen HC, Woodward TA, Raimondo M (2002) Photodynamic therapy for dysplastic Barrett esophagus and early esophageal adenocarcinoma. *Mayo Clin.Proc* 77: 1176-81.

Yachimski P, Puricelli WP, Nishioka NS (2008) Patient Predictors of Esophageal Stricture Development After Photodynamic Therapy. *Clinical Gastroenterology and Hepatology* 6: 302-8.

Yachimski P, Puricelli WP, Nishioka NS (2009) Patient predictors of histopathologic response after photodynamic therapy of Barrett's esophagus with high-grade dysplasia or intramucosal carcinoma. *Gastrointestinal Endoscopy* 69: 205-12.

Other References

Fernando, HC, Murthy SC, Hofstetter W et al. (2009) The society of thoracic surgeons practice guidelines series: Guidelines for the management of Barrett's esophagus with high-grade dysplasia. *Ann Thorac Surg*; 87: 1993-2002

Garside R, Pitt M, Somerville M et al. (2006) Surveillance of Barrett's oesophagus: exploring the uncertainty through systematic review, expert workshop and economic modelling. *Health Technol.Assess* 10: 1-iv.

Green S, Tawil A, Barr H et al. (2009) Surgery versus radical endotherapies for early cancer and high grade dysplasia in Barrett's oesophagus. *Cochrane Database Syst Rev.* CD007334.

Rees-Jonathan RE, Lao SP, Wong A et al. (2010) Treatment for Barrett's oesophagus. *Cochrane Database Syst Rev.* CD004060.

Excluded Studies

Photodynamic therapy is a cost-effective treatment option for patients with high-grade dysplasia in Barrett's esophagus. *AHRQ Research Activities* [298], 4. 2005. EXC - commentary on Vij 2004 (health economic study).

Ackroyd, R., Brown, N., Vernon, D., Roberts, D., Stephenson, T., Marcus, S., Stoddard, C., and Reed, M. 5-Aminolevulinic acid photosensitization of dysplastic Barrett's esophagus: a pharmacokinetic study. 19991206. *Photochemistry & Photobiology* 70[4], 656-662. 1999. MEDLINE
MEDLINE. EXC - not HGD.

Ackroyd, R., Brown, N. J., Stephenson, T. J., Stoddard, C. J., and Reed, M. W. Ablation treatment for Barrett oesophagus: what depth of tissue destruction is needed? *J Clin.Pathol* 52[7], 509-512. 1999. EXC - not effectiveness study, but measurement of depth of epithelium. Background information?

Ackroyd, R., Brown, N. J., Davis, M. F., Stephenson, T. J., Stoddard, C. J., and Reed, M. W. Aminolevulinic acid-induced photodynamic therapy: safe and effective ablation of dysplasia in

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Ackroyd, R., Brown, N. J., Davis, M. F., Stephenson, T. J., Marcus, S. L., Stoddard, C. J., Johnson, A. G., and Reed, M. W. Photodynamic therapy for dysplastic Barrett's oesophagus: a prospective, double blind, randomised, placebo controlled trial. Gut 47[5], 612-617. 2000. EXC - not HGD.

Ackroyd, R., Tam, W., Schoeman, M., Devitt, P. G., and Watson, D. I. Prospective randomized controlled trial of argon plasma coagulation ablation vs. endoscopic surveillance of patients with Barrett's esophagus after antireflux surgery. 20040521. Gastrointestinal Endoscopy 59[1], 1-7. 2004. MEDLINE
MEDLINE. EXC - not HGD.

Ahmad, N. A., Kochman, M. L., Long, W. B., Furth, E. E., and Ginsberg, G. G. Efficacy, safety, and clinical outcomes of endoscopic mucosal resection: a study of 101 cases. 20020418. Gastrointestinal Endoscopy 55[3], 390-396. 2002. MEDLINE. EXC - Mixed population - only 19% of lesions were oesophageal lesions

Akhtar, K., Byrne, J. P., Bancewicz, J., and Attwood, S. E. Argon beam plasma coagulation in the management of cancers of the esophagus and stomach. 20010202. Surgical Endoscopy 14[12], 1127-1130. 2000. MEDLINE. EXC - Population with advanced and localised cancer of stomach and oesophagus only 3/48 at Barrett's mucosa

Allgood, P. C. and Bachmann, M. Medical or surgical treatment for chronic gastro-oesophageal reflux: a systematic review of published evidence of effectiveness. European Journal of Surgery 166(9), 713-721. 2000. EXC - review of interventions (medical, fundoplication) for GORD. One study with BO patients, but not ablation therapy.

Armstrong, D., Marshall, J. K., Chiba, N., Enns, R., Fallone, C. A., Fass, R., Hollingworth, R., Hunt, R. H., Kahrilas, P. J., Mayrand, S., Moayyedi, P., Paterson, W. G., Sadowski, D., and Veldhuyzen van Zanten, S. J. O. Canadian Consensus Conference on the management of gastroesophageal reflux disease in adults - Update 2004. Canadian Journal of Gastroenterology 19[1], 15-35. 2005. EXC - guidelines based on a literature search, but no details of methods used. Checked references for relevant studies.

Armstrong, D. Should patients with Barrett's oesophagus be kept under surveillance? The case for. 20081224. Best Practice & Research in Clinical Gastroenterology 22[4], 721-739. 2008. MEDLINE. EXC - not available.

Arora, G., Basra, S., Roorda, A. K., and Triadafilopoulos, G. Radiofrequency ablation of Barrett's esophagus. European Surgery - Acta Chirurgica Austriaca 41[1], 19-25. 2009. EXC - no methods of review reported. Checked references for relevant studies.

Awan, M. A. and Tarin, S. A. Review of photodynamic therapy. Surgeon 4[4], 231-236. 2006. EXC - not systematic review. Checked references for relevant studies.

Barham, C. P., Jones, R. L., Biddlestone, L. R., Hardwick, R. H., Shepherd, N. A., and Barr, H. Photothermal laser ablation of Barrett's oesophagus: endoscopic and histological evidence of squamous re-epithelialisation. Gut 41[3], 281-284. 1997. EXC - not HGD (based on abstract).

Barr, H., Stone, N., and Rembacken, B. Endoscopic therapy for Barrett's oesophagus. *Gut* 54[6], 875-884. 2005. EXC - not systematic review. Checked references for relevant studies.

Barr, H. Photodynamic therapy and endoscopic mucosal resection as minimally invasive approaches for the treatment of early esophageal tumors: Pre-clinical and clinical experience in Lausanne - Commentary. *Photodiagnosis and Photodynamic Therapy* 2[1 SPEC. ISS.], 43-44. 2005. EXC - Not available through British Library

Basseri, B., Conklin, J. L., Mertens, R. B., Lo, S. K., Bellack, G. S., and Shaye, O. A. Heterotopic gastric mucosa (inlet patch) in a patient with laryngopharyngeal reflux (LPR) and laryngeal carcinoma: a case report and review of literature. *Diseases of the Esophagus* 22[4], E1-E5. 2009. In-Process. EXC - no dysplasia. Also complicated case, not representative?

Basu, K. K., Talwar, V., and de Caestecker, J. S. Effects of low-power argon plasma coagulation thermoablation of Barrett's epithelium on oesophageal motility. *European Journal of Gastroenterology and Hepatology* 18[7], 733-737. 2006. EXC - not HGD. Same population as Basu 2002.

Basu, K. K., Pick, B., Bale, R., West, K. P., and de Caestecker, J. S. Efficacy and one year follow up of argon plasma coagulation therapy for ablation of Barrett's oesophagus: factors determining persistence and recurrence of Barrett's epithelium. *Gut* 51[6], 776-780. 2002. EXC - not HGD.

Beger, H. G., Schwarz, A., and Bergmann, U. Progress in gastrointestinal tract surgery: the impact of gastrointestinal endoscopy. 20030416. *Surgical Endoscopy* 17[2], 342-350. 2003. MEDLINE. EXC - narrative review. Checked references.

Bellnier, D. A., Greco, W. R., Loewen, G. M., Nava, H., Oseroff, A. R., Pandey, R. K., Tsuchida, T., and Dougherty, T. J. Population pharmacokinetics of the photodynamic therapy agent 2-[1-hexyloxyethyl]-2-devinyl pyropheophorbide-a in cancer patients. 20030516. *Cancer Research* 63[8], 1806-1813. 15-4-2003. MEDLINE
MEDLINE. EXC - Population already has invasive carcinoma of the oesophagus and the lungs

Berenson, M. M., Johnson, T. D., Markowitz, N. R., Buchi, K. N., and Samowitz, W. S. Restoration of squamous mucosa after ablation of Barrett's esophageal epithelium. 19930629. *Gastroenterology* 104[6], 1686-1691. 1993. MEDLINE
MEDLINE. EXC - not HGD. Complications of BO included low to moderate HGD before APC treatment.

Biddlestone, L. R., Barham, C. P., Wilkinson, S. P., Barr, H., and Shepherd, N. A. The histopathology of treated Barrett's esophagus: squamous reepithelialization after acid suppression and laser and photodynamic therapy. 19980327. *American Journal of Surgical Pathology* 22[2], 239-245. 1998. MEDLINE
MEDLINE. EXC - Mixed population ranging from non-dysplastic BO to invasive cancer

Bonavina, L., Ceriani, C., Carazzone, A., Segalin, A., Ferrero, S., and Peracchia, A. Endoscopic laser ablation of nondysplastic Barrett's epithelium: is it worthwhile? 20000630. *Journal of Gastrointestinal Surgery* 3[2], 194-199. 1999. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Bowers, S. P., Mattear, S. G., Waring, P. J., Galloway, K., Nasir, A., Pascal, R., and Hunter, J. G. KTP laser ablation of Barrett's esophagus after anti-reflux surgery results in long-term loss of intestinal metaplasia. *Surgical Endoscopy* 17[1], 49-54. 2003. EXC - not HGD (based on abstract).

Brandt, L. J. and Kauvar, D. R. Laser-induced transient regression of Barrett's epithelium. *Gastrointestinal Endoscopy* 38[5], 619-622. 1992. EXC - case report with no documented dysplasia prior to treatment.

Bright, T., Watson, D. I., Tam, W., Game, P. A., Astill, D., Ackroyd, R., Wijnhoven, B. P., Devitt, P. G., and Schoeman, M. N. Randomized trial of argon plasma coagulation versus endoscopic surveillance for barrett esophagus after antireflux surgery: late results. 20080124. *Annals of Surgery* 246[6], 1016-1020. 2007. MEDLINE
MEDLINE. EXC - not HGD (based on abstract - mention of 'development' not recurrence).

Bronner, M. P., Overholt, B. F., Taylor, S. L., Haggitt, R. C., Wang, K. K., Burdick, J. S., Lightdale, C. J., Kimmey, M., Nava, H. R., Sivak, M. V., Nishioka, N., Barr, H., Canto, M. I., Marcon, N., Pedrosa, M., Grace, M., and Depot, M. Squamous Overgrowth Is Not a Safety Concern for Photodynamic Therapy for Barrett's Esophagus With High-Grade Dysplasia. *Gastroenterology* 136[1], 56-64. 2009. EXC - Overholt RCT (2005,2007) but looking at histological outcome of squamous cell overgrowth post PDT

Byrne, J. P., Armstrong, G. R., and Attwood, S. E. Restoration of the normal squamous lining in Barrett's esophagus by argon beam plasma coagulation. 19981028. *American Journal of Gastroenterology* 93[10], 1810-1815. 1998. MEDLINE
MEDLINE. EXC - Population with HGD only 3/30, 4 LGD and 23/30 non-dysplastic BO

Calzavara, F., Tomio, L., Corti, L., Zorat, P. L., Barone, I., Peracchia, A., Norberto, L., D'Arcais, R. F., and Berti, F. Oesophageal cancer treated by photodynamic therapy alone or followed by radiation therapy. *J Photochem.Photobiol.B* 6[1-2], 167-174. 1990. EXC - Advanced carcinoma of the oesophagus.

Calzavara, F., Tomio, L., and Norberto, L. Photodynamic therapy in the treatment of malignant tumours of the upper aerodigestive tract. *Lasers in Medical Science* 4, 279-284. 1989. EXC - study was on malignant cancer of the upper aerodigestive system. Tumor was not staged

Chang, C. C., Fang, C. L., Lou, H. Y., Hsieh, C. R., and Chen, S. H. Metachronous esophageal cancer and colon cancer treated by endoscopic mucosal resection. 20070622. *Journal of the Formosan Medical Association* 106[3:Suppl], Suppl-9. 2007. MEDLINE. EXC - squamous oesophageal cancer.

Chino, O., Shimada, H., Kise, Y., Nishi, T., Hara, T., Yamamoto, S., Tanaka, M., Kajiwara, H., Kijima, H., and Makuuchi, H. Early carcinoma of the esophagus associated with achalasia treated by endoscopic mucosal resection: Report of a case. *Tokai Journal of Experimental and Clinical Medicine* 33[1], 13-16. 2008. EXC - squamous cell carcinoma. Also no mention of Barrett's oesophagus or IM.

Chino, O., Makuuchi, H., Machimura, T., Mizutani, K., Shimada, H., Kanno, K., Nishi, T., Tanaka, H., Sasaki, T., Tajima, T., Mitomi, T., and Sugihara, T. Treatment of esophageal cancer in patients over 80 years old. 19970522. *Surgery Today* 27[1], 9-16. 1997. MEDLINE. EXC - Mixed population with grade I to IV cancers

Chiu, P. W. Y., Chan, K. F., Lee, Y. T., Sung, J. J. Y., Lau, J. Y. W., and Ng, E. K. W. Endoscopic submucosal dissection used for treating early neoplasia of the foregut using a combination of knives. *Surgical Endoscopy* 22[3], 777-783. 2008. EXC - ESD, not EMR (based on abstract).

Ciocirlan, M., Lapalus, M. G., Hervieu, V., Souquet, J. C., Napoleon, B., Scoazec, J. Y., Lefort, C., Saurin, J. C., and Ponchon, T. Endoscopic mucosal resection for squamous premalignant and early malignant lesions of the esophagus. 20070309. *Endoscopy* 39[1], 24-29. 2007. MEDLINE. EXC - squamous neoplastic lesions.

Corti, L., Skarlatos, J., Boso, C., Cardin, F., Kosma, L., Koukourakis, M. I., Giatromanolaki, A., Norberto, L., Shaffer, M., and Beroukas, K. Outcome of patients receiving photodynamic therapy for early esophageal cancer. *Int.J Radiat.Oncol.Biol.Phys.* 47[2], 419-424. 1-5-2000. EXC - inoperable invasive carcinoma

De, Rezende L., Lucendo, A. J., and Alvarez-Arguelles, H. Granular cell tumors of the esophagus: Report of five cases and review of diagnostic and therapeutic techniques. *Diseases of the Esophagus* 20[5], 436-443. 2007. EXC - granular cell tumours. Not Barrett's oesophagus or HGD.

DeVault, K. R. and Wolfsen, H. C. Esophageal dysmotility in Barrett's esophagus with high grade dysplasia is worsened by photodynamic therapy. *Am.J Gastroenterol* 97[9], S24. 2002. EXC - Study was on oesophageal motility in BO.

Development and Evaluation Committee. Surveillance of Barrett's oesophagus. Southampton: Wessex Institute for Health Research and Development (WIHRD) . 1999. United Kingdom. EXC - assumed out of date. See Garside HTA. Pre 2004.

Diaz-Cervantes, E., Torre-Bravo, A., Spechler, S. J., Torres-Durazo, E., Sobrino-Cossio, S., Martinez-Carrillo, O., and Gamboa-Robles, J. Banding without resection (endoscopic mucosal ligation) as a novel approach for the ablation of short-segment Barrett's epithelium: results of a pilot study. 20070914. *American Journal of Gastroenterology* 102[8], 1640-1645. 2007. MEDLINE. EXC - nondysplastic BO. Not HGD.

Dijkmeester, W. A., Wijnhoven, B. P., Watson, D. I., Leong, M. P., Michael, M. Z., Mayne, G. C., Bright, T., Astill, D., and Hussey, D. J. MicroRNA-143 and -205 expression in neosquamous esophageal epithelium following Argon plasma ablation of Barrett's esophagus. *Journal of Gastrointestinal Surgery* 13[5], 846-853. 2009. In-Process. EXC - not HGD. 2 participants had LGD.

Dina, L., Tantau, M., Dumitru, D., Zaharia, T., Pascu, O., Grigorescu, M., and Acalovschi, M. Endoscopic mucosal resection for early esophageal cancer. A case report. 20021119. *Romanian Journal of Gastroenterology* 11[3], 223-227. 2002. MEDLINE. EXC - squamous cell carcinoma.

Dix, A. J. and Barr, H. Photothermal ablation of metaplastic columnar-lined (Barrett's) oesophagus, experimental studies for safe endoscopic laser therapy. *Prog Biomed Optics* 2922, 275-280. 1996. EXC - not effectiveness study. No clinical outcomes.

Dulai, G. S., Jensen, D. M., Cortina, G., Fontana, L., and Ippoliti, A. Randomized trial of argon plasma coagulation vs. multipolar electrocoagulation for ablation of Barrett's esophagus. 20050719. *Gastrointestinal Endoscopy* 61[2], 232-240. 2005. MEDLINE MEDLINE. EXC - not HGD (based on abstract).

Dumoulin, F. L., Terjung, B., Neubrand, M., Scheurlen, C., Fischer, H. P., and Sauerbruch, T. Treatment of Barrett's esophagus by endoscopic argon plasma coagulation. 19980223. *Endoscopy* 29[8], 751-753. 1997. MEDLINE MEDLINE. EXC - 2 case reports, both with non-dysplastic BO.

Dunkin, B. J., Martinez, J., Bejarano, P. A., Smith, C. D., Chang, K., Livingstone, A. S., and Melvin, W. S. Thin-layer ablation of human esophageal epithelium using a bipolar radiofrequency balloon device. *Surg.Endosc.* 20[1], 125-130. 2006. EXC - population with advanced oesophageal adenocarcinoma

Dvorak, K., Ramsey, L., Payne, C. M., Sampliner, R., Fass, R., Bernstein, H., Prasad, A., and Garewal, H. Abnormal expression of biomarkers in incompletely ablated Barrett's esophagus). 20070119. *Annals of Surgery* 244[6], 1031-1036. 2006. MEDLINE MEDLINE. EXC - not HGD (based on abstract).

- Eckardt, V. F., Junginger, T., Gabbert, H. E., and Bettendorf, U. Superficial esophageal carcinoma in achalasia, detected by endoscopic surveillance. 19920827. *Zeitschrift fur Gastroenterologie* 30[6], 411-414. 1992. MEDLINE. EXC - squamous cell carcinoma.
- Eickhoff, A., Jakobs, R., Weickert, U., Hartmann, D., Schilling, D., Alsenbesy, M., Eickhoff, J. C., and Riemann, J. F. Long-Segment early squamous cell carcinoma of the proximal esophagus: curative treatment and long-term follow-up after 5-aminolevulinic acid (5-ALA)-photodynamic therapy. 20060808. *Endoscopy* 38[6], 641-643. 2006. MEDLINE
MEDLINE. EXC - Case report of squamous cell carcinoma
- Eldaif, S. M., Lin, E., Singh, K. A., Force, S. D., and Miller, D. L. Radiofrequency Ablation of Barrett's Esophagus: Short-Term Results. *Annals of Thoracic Surgery* 87[2], 405-411. 2009. EXC - not HGD (based on abstract).
- Endo, K., Kawamoto, K., Baba, H., Yamamoto, M., Ikeda, Y., Toh, Y., Kohnoe, S., and Okamura, T. Endoscopic mucosal resection for early cardia cancer by minimum laparotomy. 20030401. *American Journal of Surgery* 185[3], 285-287. 2003. MEDLINE. EXC - carcial cancer. No mention of Barrett's oesophagus or IM.
- Erickson, L. Assessment of photodynamic therapy using porfimer sodium for esophageal, bladder and lung cancers. Montreal: Agence d'Evaluation des Technologies et des Modes d'Intervention en Sante (AETMIS) , 54. 2004. Canada. EXC - no clear inclusion/exclusion criteria. Checked references for relevant studies. No studies appeared relevant as is about oesophageal cancer, not Barrett's oesphagus or early cancer.
- Ertan, A., Zimmerman, M., and Younes, M. Esophageal adenocarcinoma associated with Barrett's esophagus: long-term management with laser ablation. 19960206. *American Journal of Gastroenterology* 90[12], 2201-2203. 1995. MEDLINE
MEDLINE. EXC - case report
- Faigel, D. O., Lieberman, D. A., Weinstein, W. M., Fanning, S., Fennerty, M. B., and Sampliner, R. B. Effect of multipolar electrocoagulation on EUS findings in Barrett's esophagus. 20020124. *Gastrointestinal Endoscopy* 55[1], 23-26. 2002. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).
- Faivre, J., Bory, R., and Moulinier, B. Benign tumors of oesophagus: value of endoscopy. 19790426. *Endoscopy* 10[4], 264-268. 1978. MEDLINE. EXC - endoscopic resection for intraluminal tumours. No mention of Barrett's oesophagus or IM.
- Familiari, L., Scaffidi, M., Bonica, M., Consolo, P., Giacobbe, G., Fichera, D., and Familiari, P. Endoscopic treatment of Barrett's epithelium with Argon Plasma Coagulation. Long-term follow-up. *Minerva Gastroenterologica e Dietologica* 49[1], 63-70. 2003. EXC - not HGD (based on abstract - no dysplasia or cancer 'developed' not recurred).
- Fass, R., Sampliner, R. E., Malagon, I. B., Hayden, C. W., Camargo, L., Wendel, C. S., and Garewal, H. S. Failure of oesophageal acid control in candidates for Barrett's oesophagus reversal on a very high dose of proton pump inhibitor. *Alimentary Pharmacology and Therapeutics* 14[5], 597-602. 2000. EXC - not HGD (based on abstract).
- Fass, R., Yalam, J. M., Camargo, L., Johnson, C., Garewal, H. S., and Sampliner, R. E. Increased esophageal chemoreceptor sensitivity to acid in patients after successful reversal of Barrett's esophagus. *Digestive Diseases and Sciences* 42[9], 1853-1858. 1997. EXC - no dysplasia documented.
- Fass, R., Garewal, H. S., Hayden, C. W., Ramsey, L., and Sampliner, R. E. Preferential repair by squamous epithelium of thermal induced injury to the proximal stomach in patients undergoing ablation of Barrett's esophagus. 20010823. *Gastrointestinal Endoscopy* 53[7],

711-716. 2001. MEDLINE
MEDLINE. EXC - no dysplasia documented.

Fennerty, M. B., Corless, C. L., Sheppard, B., Faigel, D. O., Lieberman, D. A., and Sampliner, R. E. Pathological documentation of complete elimination of Barrett's metaplasia following endoscopic multipolar electrocoagulation therapy. 20010802. *Gut* 49[1], 142-144. 2001. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Ferguson, M. K., Naunheim, K. S., Altorki, N. K., and Putnam, J. B., Jr. Resection for Barrett's mucosa with high-grade dysplasia: Implications for prophylactic photodynamic therapy. *Journal of Thoracic and Cardiovascular Surgery* 114[5], 824-829. 1997. EXC - Patients studied, all had oesophagectomy done based on invasive carcinoma

Ferraris, R., Fracchia, M., Foti, M., Sidoli, L., Taraglio, S., Vigano', L., Giaccone, C., Rebecchi, F., Meineri, G., Senore, C., Pera, A., Bima, C., Bertolino, F., Capussotti, R., Morino, M., Crosta, C., Fiore, C., D'Onofrio, V., Jaquinto, G., Sablich, G., Lacchin, T., and Suriani, R. Barrett's oesophagus: Long-term follow-up after complete ablation with argon plasma coagulation and the factors that determine its recurrence. *Alimentary Pharmacology and Therapeutics* 25[7], 835-840. 2007. EXC - not HGD (based on abstract).

Fisher, R. S., Bromer, M. Q., Thomas, R. M., Cohen, S., Krevsky, B., Horwitz, B., Glazier, K. D., Das, K., and Das, K. M. Predictors of recurrent specialized intestinal metaplasia after complete laser ablation. 20031106. *American Journal of Gastroenterology* 98[9], 1945-1951. 2003. MEDLINE
MEDLINE. EXC - Population of 31 but only 5 with HGD and analysis done for 3 of them

Fleischer, D. E., Overholt, B. F., Sharma, V. K., Reymunde, A., Kimmey, M. B., Chuttani, R., Chang, K. J., Lightdale, C. J., Santiago, N., Pleskow, D. K., Dean, P. J., and Wang, K. K. Endoscopic ablation of Barrett's esophagus: a multicenter study with 2.5-year follow-up. 20090409. *Gastrointestinal Endoscopy* 68[5], 867-876. 2008. MEDLINE
MEDLINE. EXC - not HGD.

Forcione, D. G., Hasan, T., Ortel, B. J., and Nishioka, N. S. Optimization of aminolevulinic acid-based photodynamic therapy of Barrett's oesophagus with high grade dysplasia. *Gastrointestinal Endoscopy* 59, 251. 2004. EXC - Abstract only and incredibly poor study design, N=6 and 4 arms

Formentini, A., Schwarz, A., Straeter, J., Stanescu, A., and Henne-Bruns, D. Treatment of Barrett's esophagus with argon plasma coagulation and antireflux surgery. A retrospective analysis. 20080314. *Hepato-Gastroenterology* 54[79], 1991-1996. 2007. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Frantzides, C. T., Madan, A. K., Moore, R. E., Zografakis, J. G., Carlson, M. A., and Keshavarzian, A. Laparoscopic transgastric esophageal mucosal resection for high-grade dysplasia. *Journal of Laparoendoscopic and Advanced Surgical Techniques - Part A* 14[5], 261-265. 2004. EXC - laparoscopic transgastric esophageal mucosal resection, not endoscopic mucosal resection.

Fujimaki, M. and Nakayama, K. Endoscopic laser treatment of superficial esophageal cancer. *Semin.Surg.Oncol.* 2[4], 248-256. 1986. EXC - cases of superficial oesophageal cancer in Japan

Fujishiro, M., Yahagi, N., Kakushima, N., Kodashima, S., Ichinose, M., and Omata, M. En bloc resection of a large semicircular esophageal cancer by endoscopic submucosal dissection. 20070220. *Surgical Laparoscopy, Endoscopy & Percutaneous Techniques* 16[4], 237-241. 2006. MEDLINE. EXC - ESD, not EMR.

Fujiwara, Y., Nakagawa, K., Tanaka, T., Utsunomiya, J., Nishigami, T., and Uematsu, K. Small cell carcinoma of the esophagus combined with superficial esophageal cancer. 19970213. Hepato-Gastroenterology 43[11], 1360-1369. 1996. MEDLINE. EXC - EMR for squamous cell carcinoma.

Ganz, R. A., Utley, D. S., Stern, R. A., Jackson, J., Batts, K. P., and Termin, P. Complete ablation of esophageal epithelium with a balloon-based bipolar electrode: a phased evaluation in the porcine and in the human esophagus. 20050316. Gastrointestinal Endoscopy 60[6], 1002-1010. 2004. MEDLINE
MEDLINE. EXC - phase I-III preclinical with swines and phase IV 3 patients with oesophageal adenocarcinoma

Garewal, H., Ramsey, L., Sharma, P., Kraus, K., Sampliner, R., and Fass, R. Biomarker studies in reversed Barrett's esophagus. 19991027. American Journal of Gastroenterology 94[10], 2829-2833. 1999. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Garside, R., Pitt, M., Somerville, M., Stein, K., Price, A., and Gilbert, N. Surveillance of Barrett's oesophagus: exploring the uncertainty through systematic review, expert workshop and economic modelling. Health Technol.Assess 10[8], 1-iv. 2006. EXC - not a review of treatment. No relevant studies.

Gerke, H., Crowe, G. C., and Iannettoni, M. D. Endoscopic closure of cervical esophageal perforation caused by traumatic insertion of a mucosectomy cap. 20070720. Annals of Thoracic Surgery 84[1], 296-298. 2007. MEDLINE. EXC - Case report

Gerke, H., Siddiqui, J., Parekh, K. R., Vanderheyden, A. D., and Mitros, F. A. Esophageal perforation complicating band ligator-assisted mucosal resection. Gastrointestinal Endoscopy 69[1], 153-154. 2009. EXC - endoscopic resection for evaluation and staging, not curative intent.

Ginsberg, G. G., Barkun, A. N., Bosco, J. J., Burdick, J. S., Isenberg, G. A., Nakao, N. L., Petersen, B. T., Silverman, W. B., Slivka, A., and Kelsey, P. B. The argon plasma coagulator: February 2002. Gastrointest.Endosc. 55[7], 807-810. 2002. EXC - not primary study or systematic review. Checked reference list.

Giovannini, M., Bernardini, D., Moutardier, V., Monges, G., Houvenaeghel, G., Seitz, J. F., and Derlpero, J. R. Endoscopic mucosal resection (EMR): results and prognostic factors in 21 patients. 20000128. Endoscopy 31[9], 698-701. 1999. MEDLINE. EXC - only 2 out of 21 refer to adenocarcinomas of the oesophagus

Globe, J., Smythe, A., Kelty, C. J., Reed, M. W. R., Brown, N. J., and Ackroyd, R. The effect of photodynamic therapy (PDT) on oesophageal motility and acid clearance in patients with Barrett's oesophagus. Journal of Photochemistry and Photobiology B: Biology 85[1], 17-22. 2006. EXC - not HGD. Same population as Kelty 2004.

Gossner, L., May, A., Sroka, R., Stolte, M., Hahn, E. G., and Ell, C. Photodynamic destruction of high grade dysplasia and early carcinoma of the esophagus after the oral administration of 5-aminolevulinic acid. Cancer 86[10], 1921-1928. 15-11-1999. EXC - population with squamous cell carcinomas

Grade, A. J., Shah, I. A., Medlin, S. M., and Ramirez, F. C. The efficacy and safety of argon plasma coagulation therapy in Barrett's esophagus. 19990728. Gastrointestinal Endoscopy 50[1], 18-22. 1999. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Grosjean, P., Wagnieres, G., Fontollet, C., van den Bergh, H., and Monnier, P. Clinical photodynamic therapy for superficial cancer in the oesophagus and the bronchi: 514 nm

compared with 630 nm light irradiation after sensitization with Photofrin II. Br.J Cancer 77[11], 1989-1995. 1998. EXC - squamous cell carcinoma of the bronchi and or oesophagus

Grosjean, P., Savary, J. F., Mizeret, J., Wagnieres, G., Woodtli, A., Theumann, J. F., Fontolliet, C., van den Bergh, H., and Monnier, P. Photodynamic therapy for cancer of the upper aerodigestive tract using tetra(m-hydroxyphenyl)chlorin. 19980615. Journal of Clinical Laser Medicine & Surgery 14[5], 281-287. 1996. MEDLINE. EXC - greater percentage of the population had squamous cell carcinoma

Grosjean, P., Savary, J. F., and Wagnieres, G. Tetra(m-hydroxyphenyl)-chlorin clinical photodynamic therapy of early bronchial and oesophageal cancers. Lasers in Medical Science 11, 227-235. 1996. EXC - squamous cell carcinoma of the bronchi and or oesophagus

Gross, C. P., Cruz-Correa, M., Canto, M. I., McNeil-Solis, C., Valente, T. W., and Powe, N. R. The adoption of ablation therapy for Barrett's esophagus: a cohort study of gastroenterologists. 20020314. American Journal of Gastroenterology 97[2], 279-286. 2002. MEDLINE
MEDLINE. EXC - not effectiveness study.

Hage, M., Siersema, P. D., van, Dekken H., Steyerberg, E. W., Haringsma, J., van, de, V, Groot, T. E., van Veen, R. L., Sterenborg, H. J., and Kuipers, E. J. 5-aminolevulinic acid photodynamic therapy versus argon plasma coagulation for ablation of Barrett's oesophagus: a randomised trial. 20040712. Gut 53[6], 785-790. 2004. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Hage, M., Siersema, P. D., Vissers, K. J., Dinjens, W. N., Steyerberg, E. W., Haringsma, J., Kuipers, E. J., and van, Dekken H. Genomic analysis of Barrett's esophagus after ablative therapy: persistence of genetic alterations at tumor suppressor loci. 20051213. International Journal of Cancer 118[1], 155-160. 1-1-2006. MEDLINE
MEDLINE. EXC - Genomic analysis of BO

Hage, M., Siersema, P. D., Vissers, K. J., Steyerberg, E. W., Haringsma, J., Kuipers, E. J., and van, Dekken H. Molecular evaluation of ablative therapy of Barrett's oesophagus. 20050131. Journal of Pathology 205[1], 57-64. 2005. MEDLINE
MEDLINE. EXC - molecular outcomes (p53 and Ki67) only

Hayata, Y., Kato, H., Furuse, K., Kusunoki, Y., Suzuki, S., and Mimura, S. Photodynamic therapy of 168 early stage cancers of the lung and oesophagus: A Japanese multi-centre study. Lasers in Medical Science 11[4], 255-259. 1996. EXC - Mixed population of superficial lung and oesophagus with no information on the type of lesion

HAYES and Inc. Endoscopic mucosal resection for Barrett's esophagus. Lansdale, PA: HAYES, Inc . 2006. United States. EXC - not available.

HAYES and Inc. Photodynamic therapy for Barrett's oesophagus and oesophageal cancer. 18. 2001. United States, Lansdale, PA: HAYES, Inc. EXC - not available.

Heier, S. K., Rothman, K. A., Heier, L. M., and Rosenthal, W. S. Photodynamic therapy for obstructing esophageal cancer: light dosimetry and randomized comparison with Nd:YAG laser therapy. Gastroenterology 109[1], 63-72. 1995. EXC - described as patients with 'obstructing oesophageal cancer' undergoing 'palliative PDT'. Not relevant population.

Hemminger, L. L. and Wolfsen, H. C. Photodynamic therapy for Barrett's esophagus and high grade dysplasia: results of a patient satisfaction survey. 20021016. Gastroenterology Nursing 25[4], 139-141. 2002. MEDLINE
MEDLINE. EXC - Survey on patients experience

Hernandez, J. C., Reicher, S., Chung, D., Pham, B. V., Tsai, F., Disibio, G., French, S., and Eysselein, V. E. Pilot series of radiofrequency ablation of Barrett's esophagus with or without neoplasia. 20080729. *Endoscopy* 40[5], 388-392. 2008. MEDLINE
MEDLINE. EXC - Case series of 10 with 7 non-dysplastic, 2 LGD and only 1 HGD

Hinnen, P., de Rooij, F. W., van Velthuysen, M. L., Edixhoven, A., van, Hillegersberg R., Tilanus, H. W., Wilson, J. H., and Siersema, P. D. Biochemical basis of 5-aminolaevulinic acid-induced protoporphyrin IX accumulation: a study in patients with (pre)malignant lesions of the oesophagus. 19980924. *British Journal of Cancer* 78[5], 679-682. 1998. MEDLINE
MEDLINE. EXC - study of biomarkers accumulation post PDT

Hinnen, P., de Rooij, F. W., Terlouw, E. M., Edixhoven, A., van, Dekken H., van, Hillegersberg R., Tilanus, H. W., Wilson, J. H., and Siersema, P. D. Porphyrin biosynthesis in human Barrett's oesophagus and adenocarcinoma after ingestion of 5-aminolaevulinic acid. 20000822. *British Journal of Cancer* 83[4], 539-543. 2000. MEDLINE
MEDLINE. EXC - Study of biomarkers accumulation post PDT

Hinnen, P., De Rooij, F. W. M., Hop, W. C. J., Edixhoven, A., van, Dekken H., Wilson, J. H. P., and Siersema, P. D. Timing of 5-aminolaevulinic acid-induced photodynamic therapy for the treatment of patients with Barrett's oesophagus. *Journal of Photochemistry and Photobiology B: Biology* 68[1], 8-14. 2002. EXC - not HGD.

Hironaka, S.-I., Boku, N., Ohtsu, A., Ochiai, A., Yoshida, S., and Ejiri, Y. Endoscopic mucosal resection for early adenocarcinoma arising in Barrett's esophagus. *Digestive Endoscopy* 13[2], 104-107. 2001. EXC - case report

Hochain, P., Ducrott+®, P., Touchais, J. Y., Paillet, B., and Hecketsweiler, P. Extended necrosis of the oesophageal wall after photodynamic therapy: report of two cases. *Lasers in Medical Science* 11, 147-150. 1993. EXC - Case report on epidermoid carcinoma of the oesophagus.

Holscher, A. H., Vallbohmer, D., Schroder, W., and Bollschweiler, E. Limited surgery for 'early' cancer of the esophagus. *European Surgery - Acta Chirurgica Austriaca* 39[5], 273-280. 2007. EXC - narrative review. Checked references.

Hornick, J. L., Mino-Kenudson, M., Lauwers, G. Y., Liu, W., Goyal, R., and Odze, R. D. Buried Barrett's epithelium following photodynamic therapy shows reduced crypt proliferation and absence of DNA content abnormalities. 20080313. *American Journal of Gastroenterology* 103[1], 38-47. 2008. MEDLINE
MEDLINE. EXC - Study of different antigens - biomarkers

Houle, J. M., Clervoix, N., Bain, S., and Spenard, J. Lack of effect of sex and disease state on the pharmacokinetics of porfimer sodium. 20070511. *Clinical Pharmacokinetics* 45[9], 923-930. 2006. MEDLINE
MEDLINE. EXC - not relevant population (based on abstract).

Huang, G. J. Early detection and surgical treatment of esophageal carcinoma. 19820420. *Japanese Journal of Surgery* 11[6], 399-405. 1981. MEDLINE. EXC - not endoscopic resection.

Hubbard, N. and Velanovich, V. Endoscopic endoluminal radiofrequency ablation of Barrett's esophagus in patients with funduplications. *Surg.Endosc* 21[4], 625-628. 2007. EXC - not HGD.

Hur, C., Wittenberg, E., Nishioka, N. S., and Gazelle, G. S. Patient preferences for the management of high-grade dysplasia in Barrett's esophagus. *Digestive Diseases and Sciences* 50[1], 116-125. 2005. EXC - not HGD. Not effectiveness evaluation.

Hur, C., Wittenberg, E., Nishioka, N. S., and Gazelle, G. S. Quality of life in patients with various Barrett's esophagus associated health states. *Health and Quality of Life Outcomes* 4, 2006. Article Number: 45. Date of Publication: 02 Aug 2006. 2006. EXC - not HGD. Not effectiveness evaluation.

Ikeda, K., Isomoto, H., Oda, H., Shikuwa, S., Mizuta, Y., Iwasaki, K., and Kohno, S. Endoscopic submucosal dissection of a minute intramucosal adenocarcinoma in Barrett's esophagus. *Digestive Endoscopy* 21[1], 34-36. 2009. EXC - ESD, not EMR (based on abstract).

Inose, T., Kato, H., Ojima, H., Miyazaki, T., Saito, K., and Kuwano, H. Flat-type papilloma of the esophagus: A case report. *Esophagus* 2[4], 217-219. 2005. EXC - squamous papilloma.

Inoue, H. and Endo, M. Endoscopic esophageal mucosal resection using a transparent tube. 19910403. *Surgical Endoscopy* 4[4], 198-201. 1990. MEDLINE. EXC - study in 21 dogs and 1 single case report of human patient

Institute for Clinical Systems Improvement. Photodynamic therapy for head and neck, tracheobronchial, and esophageal cancer. Bloomington MN: Institute for Clinical Systems Improvement (ICSI) . 2002. United States. EXC - pre 2004. Checked references for relevant studies.

Ishihara, R., Iishi, H., Uedo, N., Takeuchi, Y., Yamamoto, S., Yamada, T., Masuda, E., Higashino, K., Kato, M., Narahara, H., and Tatsuta, M. Comparison of EMR and endoscopic submucosal dissection for en bloc resection of early esophageal cancers in Japan. *Gastrointestinal Endoscopy* 68[6], 1066-1072. 2008. EXC - Mixed population only 3adenocarcinomas and 168 squamous cell lesions in Japan

Ishihara, R., Tanaka, H., Iishi, H., Takeuchi, Y., Higashino, K., Uedo, N., Tatsuta, M., Yano, M., and Ishiguro, S. Long-term outcome of esophageal mucosal squamous cell carcinoma without lymphovascular involvement after endoscopic resection. 20080603. *Cancer* 112[10], 2166-2172. 15-5-2008. MEDLINE. EXC - squamous cell carcinoma.

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Jenkins, J. T., Charles, A., Mitchell, K. G., and Fullarton, G. M. Photodynamic therapy for Barretts' adenocarcinoma associated with an Angelchik device. *Photodiagnosis and Photodynamic Therapy* 2[3], 197-200. 2005. EXC - novel, rare case report. Not HGD (based on abstract).

Johnston, M. H., Eastone, J. A., Horwhat, J. D., Cartledge, J., Mathews, J. S., and Foggy, J. R. Cryoablation of Barrett's esophagus: A pilot study. *Gastrointestinal Endoscopy* 62[6], 842-848. 2005. EXC - not relevant intervention.

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Kahaleh, M., Van Laethem, J. L., Nagy, N., Cremer, M., and Deviere, J. Long-term follow-up and factors predictive of recurrence in Barrett's esophagus treated by argon plasma coagulation and acid suppression. 20030401. *Endoscopy* 34[12], 950-955. 2002. MEDLINE MEDLINE. EXC - not HGD (based on abstract).

Karamanolis, G. and Mallas, E. G. Role of photodynamic therapy in gastroenterology. *Annals of Gastroenterology* 18[2], 141-147. 2005. EXC - not systematic review. Checked references for relevant studies.

Karanov, S., Kostadinov, D., Shopova, M., and Kurtev, P. Photodynamic therapy in lung and gastrointestinal cancers. 19901213. *Journal of Photochemistry & Photobiology B*[1-2], 175-181. 1990. MEDLINE. EXC - mixed population of lung and gastro-intestinal tumor

Kashtan, H., Umansky, M., Birkenfeld, S., Scherubl, H., Haddad, R., Greenberg, R., and Konikoff, F. Photodynamic therapy of Barrett's esophagus with dysplasia using systemic aminolevulinic acid and a non-laser light source. A phase I/II study. *Gastrointestinal Oncology* 4[2-3], 153-157. 2002. EXC - The population is mixed with only 1 out of 8 having HGD and 7 with LGD

Katada, C., Muto, M., Manabe, T., Boku, N., Ohtsu, A., and Yoshida, S. Esophageal stenosis after endoscopic mucosal resection of superficial esophageal lesions. *Gastrointest Endosc* 57[2], 165-169. 2003. EXC - Only 1 out of 216 lesions with adenocarcinoma

Kawada, K., Kawano, T., Nagai, K., Nishikage, T., Nakajima, Y., Ogiya, K., Haruki, S., Suzuki, T., and Kawachi, H. Argon plasma coagulation for local recurrence of squamous cell carcinoma of the esophagus after endoscopic mucosal resection: Technique and outcome. *Esophagus* 5[1], 27-32. 2008. EXC - squamous cell carcinoma.

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Kelty, C. J., Ackroyd, R., Brown, N. J., Brown, S. B., and Reed, M. W. Comparison of high- vs low-dose 5-aminolevulinic acid for photodynamic therapy of Barrett's esophagus. 20040825. *Surgical Endoscopy* 18[3], 452-458. 2004. MEDLINE
MEDLINE. EXC - not HGD.

Kelty, C. J., Ackroyd, R., Brown, N. J., Stephenson, T. J., Stoddard, C. J., and Reed, M. W. R. Endoscopic ablation of Barrett's oesophagus: A randomized-controlled trial of photodynamic therapy vs. argon plasma coagulation. *Alimentary Pharmacology and Therapeutics* 20[11-12], 1289-1296. 2004. EXC - not HGD.

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Kohmura, T., Hasegawa, Y., Matsuura, H., Terada, A., Takahashi, M., and Nakashima, T. Clinical analysis of multiple primary malignancies of the hypopharynx and esophagus. *American Journal of Otolaryngology* 22[2], 107-110. 2001. EXC - squamous cell carcinoma.

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Kovacs, B. J., Chen, Y. K., Lewis, T. D., DeGuzman, L. J., and Thompson, K. S. Successful reversal of Barrett's esophagus with multipolar electrocoagulation despite inadequate acid

suppression. 19990616. *Gastrointestinal Endoscopy* 49[5], 547-553. 1999. MEDLINE
MEDLINE. EXC - not HGD.

Krishnadath, K. K., Wang, K. K., Taniguchi, K., Sebo, T. J., Buttar, N. S., Anderson, M. A., Lutzke, L. S., and Liu, W. Persistent genetic abnormalities in Barrett's esophagus after photodynamic therapy. *Gastroenterology* 119[3], 624-630. 2000. EXC - development of HGD, not recurrence post treatment (based on abstract).

Kroh, M., Hall, R., Udomsawaengsup, S., Smith, A., Yerian, L., and Chand, B. Endoscopic water jets used to ablate Barrett's esophagus: Preliminary results of a new technique. *Surgical Endoscopy* 22[11], 2498-2502. 2008. EXC - not relevant intervention.

Kubba, A. K. Role of photodynamic therapy in the management of gastrointestinal cancer. [Review] [121 refs]. 19990226. *Digestion* 60[1], 1-10. 1999. MEDLINE. EXC - narrative review. Checked references.

Kume, K. The local recurrence and the metachronous cancer after EMR for early esophageal cancer confined within the lamina propria mucosae. *Hepato-Gastroenterology* 56[91-92], 699-702. 2009. In-Process. EXC - squamous cell carcinoma.

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Lin, L.-F., Huang, P.-T., Ho, K.-S., and Tung, J.-N. Endoscopic mucosal resection of early esophageal carcinoma - Experience of 9 cases. *Journal of the Chinese Medical Association* 71[7], 347-352. 2008. EXC - squamous cell carcinoma.

Liu, H.-H., Yoshida, M., Momma, K., Oohashi, K., and Funada, N. Detection and treatment of an asymptomatic case of early esophageal cancer using chromoendoscopy and endoscopic mucosal resection. *Journal of the Formosan Medical Association* 101[3], 219-222. 2002. EXC - squamous cell carcinoma.

Lopes, C. V., Mnif, H., Pesenti, C., Bories, E., Monges, G., and Giovannini, M. p53 and Ki-67 in Barrett's carcinoma: is there any value to predict recurrence after circumferential endoscopic mucosal resection? 20081229. *Arquivos de Gastroenterologia* 44[4], 304-308. 2007. MEDLINE. EXC - Studying biomarkers

Lopes, C. V., Pereira-Lima, J., and Hartmann, A. A. p53 immunohistochemical expression in Barrett's esophagus before and after endoscopic ablation by argon plasma coagulation. 20050705. *Scandinavian Journal of Gastroenterology* 40[3], 259-263. 2005. MEDLINE
MEDLINE. EXC - no dysplasia reported. Patients excluded if they had oesophageal adenocarcinoma.

Luman, W., Lessels, A. M., and Palmer, K. R. Failure of Nd-YAG photocoagulation therapy as treatment for Barrett's oesophagus - A pilot study. *European Journal of Gastroenterology and Hepatology* 8[7], 627-630. 1996. EXC - not HGD.

Mabrut, J.-Y., Baulieux, J., Adham, M., De La Roche, E. D., Gaudin, J.-L., Souquet, J.-C., and Ducerf, C. Impact of antireflux operation on columnar-lined esophagus. *Journal of the American College of Surgeons* 196[1], 60-67. 2003. EXC - not relevant intervention.

MacNeil-Covin, L., Casson, A. G., Malatjalian, D., and van Zanten, S. V. A survey of Canadian gastroenterologists about the management of Barrett's esophagus. *Canadian Journal of Gastroenterology* 17[5], 313-317. 2003. EXC - not assessment of effectiveness.

Madisch, A., Miehke, S., Bayerdorffer, E., Wiedemann, B., Antos, D., Sievert, A., Vieth, M., Stolte, M., and Schulz, H. Long-term follow-up after complete ablation of Barrett's esophagus with argon plasma coagulation. 20050406. World Journal of Gastroenterology 11[8], 1182-1186. 28-2-2005. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Maekawa, H., Maekawa, T., Yabuki, K., Sato, K., Tamazaki, Y., Kudo, K., Wada, R., and Matsumoto, M. Multiple esophagogastric granular cell tumors. 20040210. Journal of Gastroenterology 38[8], 776-780. 2003. MEDLINE. EXC - granular cell tumours. Not Barrett's oesophagus or HGD.

Maish, M. S. and DeMeester, S. R. Endoscopic mucosal resection as a staging technique to determine the depth of invasion of esophageal adenocarcinoma. [Review] [16 refs]. 20050204. Annals of Thoracic Surgery 78[5], 1777-1782. 2004. MEDLINE. EXC - Using EMR to correctly stage patients before they go for surgery

Malhi-Chowla, N., Wolfsen, H. C., and DeVault, K. R. Esophageal dysmotility in patients undergoing photodynamic therapy. Mayo Clin.Proc 76[10], 987-989. 2001. EXC - Study was on oesophageal dysmotility

Malhi-Chowla, N., Ringley, R. K., and Wolfsen, H. C. Gastric metaplasia of the proximal esophagus associated with esophageal adenocarcinoma and Barrett's esophagus: What is the connection? Digestive Diseases 18[3], 183-185. 2000. EXC - not assessment of effectiveness.

Manner, H., May, A., Miehke, S., Dertinger, S., Wigglinghaus, B., Schimming, W., Kramer, W., Niemann, G., Stolte, M., and Ell, C. Ablation of nonneoplastic Barrett's mucosa using argon plasma coagulation with concomitant esomeprazole therapy (APBANEX): a prospective multicenter evaluation. Am.J Gastroenterol 101[8], 1762-1769. 2006. EXC - not HGD (based on abstract).

Manner, H., May, A., Pech, O., Gossner, L., Rabenstein, T., Gunter, E., Vieth, M., Stolte, M., and Ell, C. Early Barrett's carcinoma with "low-risk" submucosal invasion: long-term results of endoscopic resection with a curative intent. 20081028. American Journal of Gastroenterology 103[10], 2589-2597. 2008. MEDLINE
MEDLINE. EXC - submucosal invasion.

Manner, H., Enderle, M. D., Pech, O., May, A., Plum, N., Riemann, J. F., Ell, C., and Eickhoff, A. Second-generation argon plasma coagulation: Two-center experience with 600 patients. Journal of Gastroenterology and Hepatology 23[6], 872-878. 2008. EXC - review. Not primary study. Checked references.

Marcon, N. E. Photodynamic therapy and cancer of the esophagus. Semin.Oncol. 21[6 Suppl 15], 20-23. 1994. EXC - Narrative review, references checked

Maunoury, V., Mordon, S., Bulois, P., Mirabel, X., Hecquet, B., and Mariette, C. Photodynamic therapy for early oesophageal cancer. Digestive and Liver Disease 37[7], 491-495. 2005. EXC - Oesophageal cancer not of Barrett's origin.

May, A., Gossner, L., Behrens, A., Kohnen, R., Vieth, M., Stolte, M., and Ell, C. A prospective randomized trial of two different endoscopic resection techniques for early stage cancer of the esophagus. Gastrointest Endosc 58[2], 167-175. 2003. EXC - Mixed population of squamous cell carcinomas and adenocarcinomas

McBride, M. A., Vanagunas, A. A., Breshnahan, J. P., and Barch, D. B. Combined endoscopic thermal electrocoagulation with high dose omeprazole therapy in complicated heterotopic gastric mucosa of the esophagus. 19951208. American Journal of Gastroenterology 90[11],

2029-2031. 1995. MEDLINE

MEDLINE. EXC - not relevant diagnosis (based on abstract).

McCaughan, Jr, Ellison, E. C., Guy, J. T., Hicks, W. J., Jones, J. J., Laufman, L. R., May, E., Nims, T. A., Spiridonidis, C. H., and Williams, T. E. Photodynamic therapy for esophageal malignancy: A prospective twelve-year study. *Annals of Thoracic Surgery* 62[4], 1005-1010. 1996. EXC - Mixed population, grouped with squamous cell carcinomas

Messmann, H., Knuchel, R., Baumler, W., Holstege, A., and Scholmerich, J. Endoscopic fluorescence detection of dysplasia in patients with Barrett's esophagus, ulcerative colitis, or adenomatous polyps after 5-aminolevulinic acid-induced protoporphyrin IX sensitization. 19990219. *Gastrointestinal Endoscopy* 49[1], 97-101. 1999. MEDLINE
MEDLINE. EXC - Administration of photosensitizer

Messmann, H., Szeimies, R. M., Baumler, W., Knuchel, R., Zirngibl, H., Scholmerich, J., and Holstege, A. Enhanced effectiveness of photodynamic therapy with laser light fractionation in patients with esophageal cancer. 19971001. *Endoscopy* 29[4], 275-280. 1997. MEDLINE.
EXC - advanced oesophageal cancer.

Michel, P., Hochain, P., and Ducrott+®, P. Photodynamic therapy for oesophageal cancers. *European Journal of Cancer Care* 8[Supplement 1], 20-24. 2-12-1999. EXC - narrative review. Checked references.

Michopoulos, S., Tsibouris, P., Bouzakis, H., Sotiropoulou, M., and Kralios, N. Complete regression of Barrett's esophagus with heat probe thermocoagulation: mid-term results. 19991013. *Gastrointestinal Endoscopy* 50[2], 165-172. 1999. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Miquel, J. M., Abad, R., Souto, J., Fabra, R., Vila, M., Bargallo, D., Vazquez-Iglesia, J. L., and Varas Lorenzo, M. J. EUS-guided mucosectomy for gastrointestinal cancer. 20061130. *Revista Espanola de Enfermedades Digestivas* 98[8], 591-596. 2006. MEDLINE. EXC - Mixed population, only 3 out of 18 cases with oesophageal cancer

Mirnezami, R., Rohatgi, A., Sutcliffe, R. P., Hamouda, A., and Mason, R. C. Transhiatal oesophagectomy: treatment of choice for high-grade dysplasia. *Eur J Cardiothorac.Surg* 36[2], 364-367. 2009. EXC - surgery, not endoscopic therapy.

Miyashita, M., Tajiri, T., Maruyama, H., Makino, H., Nomura, T., Sasajima, K., and Yamashita, K. Endoscopic mucosal resection scissors for the treatment of early gastric cancer. 20031201. *Endoscopy* 35[7], 611-612. 2003. MEDLINE. EXC - gastric cancer.

Mizobuchi, S., Nakatani, H., Akimori, T., Kuge, K., Okazaki, Y., and Sasaguri, S. Novel use of Weerda laryngoscope to remove early cervical esophageal cancer. 20060808. *Annals of Thoracic Surgery* 79[6], e34-e35. 2005. MEDLINE. EXC - submucosal penetration (by microscopic findings and immunohistochemical stainings).

Milkvy, P., Messmann, H., Regula, J., Conio, M., Pauer, M., Millson, C. E., MacRobert, A. J., and Bown, S. G. Photodynamic therapy for gastrointestinal tumors using three photosensitizers--ALA induced PPIX, Photofrin and MTHPC. A pilot study. 19980910. *Neoplasma* 45[3], 157-161. 1998. MEDLINE. EXC - study lacked information on oesophageal tumor

Milkvy, P., Messmann, H., Regula, J., Conio, M., Pauer, M., Millson, C. E., MacRobert, A. J., and Bown, S. G. Sensitization and photodynamic therapy (PDT) of gastrointestinal tumors with 5-aminolaevulinic acid (ALA) induced protoporphyrin IX (PPIX). A pilot study. 19950912. *Neoplasma* 42[3], 109-113. 1995. MEDLINE. EXC - study lacked information on the 'benign' tumor.

Moghissi, K., Dixon, K., and Campbell, A. Adeno-carcinoma of the pharyngo-oesophageal junction and cervical oesophagus in a patient with an oesophagus lined entirely by columnar epithelium. Report of a case treated by photodynamic therapy (PDT). *Photodiagnosis and Photodynamic Therapy* 5[3], 224-227. 2008. EXC - treatment of an 'obstructive malignant lesion'. Not relevant case report.

Moghissi, K. and Dixon, K. Photodynamic therapy (PDT) in esophageal cancer: a surgical view of its indications based on 14 years experience. 20040430. *Technology in Cancer Research & Treatment* 2[4], 319-326. 2003. MEDLINE. EXC - Population had advance (invasive) oesophageal cancer. PDT used as a palliative treatment.

Monnier, P., Fontolliet, C., and Ollyo, J. B. Endoscopic findings of 100 early-stage esophageal cancers. *Diagnostic & Therapeutic Endoscopy* 1[2], 83-92. 1994. In-Data-Review. EXC - staging, not curative intent.

Monnier, Ph, Savary, M., Fontolliet, Ch, Wagnieres Chatelain, G. A., Cornaz, P., Depeursinge, Ch, and van den Bergh, H. Photodetection and photodynamic therapy of 'early' squamous cell carcinomas of the pharynx, oesophagus and tracheo-bronchial tree. *Lasers in Medical Science* 5[2], 149-168. 1990. EXC - squamous cell carcinoma.

Montes, C. G., Brandalise, N. A., Deliza, R., Novais de Magalhaes, A. F., and Ferraz, J. G. Antireflux surgery followed by bipolar electrocoagulation in the treatment of Barrett's esophagus. 19991013. *Gastrointestinal Endoscopy* 50[2], 173-177. 1999. MEDLINE MEDLINE. EXC - no dysplasia reported.

Mordon, S. and Maunoury, V. Using white light during photodynamic therapy: Visualization only or treatment? *European Journal of Gastroenterology and Hepatology* 18[7], 765-771. 2006. EXC - technical evaluation, not clinical effectiveness.

Morino, M., Rebecchi, F., Giaccone, C., Taraglio, S., Sidoli, L., and Ferraris, R. Endoscopic ablation of Barrett's esophagus using argon plasma coagulation (APC) following surgical laparoscopic fundoplication. 20030508. *Surgical Endoscopy* 17[4], 539-542. 2003. MEDLINE MEDLINE. EXC - not HGD.

Mork, H., Scheurlen, M., Al-Taie, O., Zierer, A., Kraus, M., Schottker, K., Jakob, F., and Kohrle, J. Glutathione peroxidase isoforms as part of the local antioxidative defense system in normal and Barrett's esophagus. 20030616. *International Journal of Cancer* 105[3], 300-304. 20-6-2003. MEDLINE MEDLINE. EXC - not HGD.

Mork, H., Al-Taie, O., Berlin, F., Kraus, M. R., and Scheurlen, M. High recurrence rate of Barrett's epithelium during long-term follow-up after argon plasma coagulation. 20070322. *Scandinavian Journal of Gastroenterology* 42[1], 23-27. 2007. MEDLINE MEDLINE. EXC - not HGD.

Mork, H., Barth, T., Kreipe, H. H., Kraus, M., Al-Taie, O., Jakob, F., and Scheurlen, M. Reconstitution of squamous epithelium in Barrett's oesophagus with endoscopic argon plasma coagulation: a prospective study. 19990225. *Scandinavian Journal of Gastroenterology* 33[11], 1130-1134. 1998. MEDLINE MEDLINE. EXC - not HGD.

Morris, C. D., Byrne, J. P., Armstrong, G. R., and Attwood, S. E. Prevention of the neoplastic progression of Barrett's oesophagus by endoscopic argon beam plasma ablation. 20011025. *British Journal of Surgery* 88[10], 1357-1362. 2001. MEDLINE MEDLINE. EXC - Population only 9/55 with HGD, 9 LGD and 37 non-dysplastic BO

Naritaka, Y., Ogawa, K., Shimakawa, T., Wagatsuma, Y., Katsube, T., Kajiwara, T., and Aiba, M. Study on endoscopic esophageal mucosal resection with ligating device. I--Clinical study.

20011219. Hepato-Gastroenterology 48[40], 1015-1017. 2001. MEDLINE. EXC - Mixed population with 12 out of 15 with squamous cell carcinoma in Japan

National Horizon Scanning Centre. Porfimer sodium photodynamic therapy for high-grade dysplasia of Barrett's oesophagus - horizon scanning review. Birmingham: National Horizon Scanning Centre (NHSC) , 5. 2003. United Kingdom. EXC - pre 2004. Checked references for relevant studies.

National Institute for Clinical Excellence. Guidance on the use of proton pump inhibitors (PPI) in the treatment of dyspepsia. 2000. United Kingdom, London: National Institute for Clinical Excellence (NICE). Technology Appraisal Guidance - No.7. EXC - replaced by CG17 on dyspepsia, not Barrett's oesophagus. Pre 2004.

Nguyen, N. T., Schauer, P., and Luketich, J. D. Minimally invasive esophagectomy for Barrett's esophagus with high-grade dysplasia. 20000323. Surgery 127[3], 284-290. 2000. MEDLINE
MEDLINE. EXC - not effectiveness of ablative therapy.

Norberto, L., Polese, L., Angriman, I., Erroi, F., Cecchetto, A., and D'Amico, D. F. High-energy laser therapy of Barrett's esophagus: preliminary results. 20040729. World Journal of Surgery 28[4], 350-354. 2004. MEDLINE
MEDLINE. EXC - Population of 15, but only 2 HGD (1 LGD and 11 non-dysplastic BO)

Oh, D. S., Hagen, J. A., Chandrasoma, P. T., Dunst, C. M., DeMeester, S. R., Alavi, M., Bremner, C. G., Lipham, J., Rizzetto, C., Cote, R., and DeMeester, T. R. Clinical biology and surgical therapy of intramucosal adenocarcinoma of the esophagus.[see comment]. 20060829. Journal of the American College of Surgeons 203[2], 152-161. 2006. MEDLINE.
EXC - oesophagectomy, not endoscopic therapy.

Okunaka, T., Kato, H., Conaka, C., Yamamoto, H., Bonaminio, A., and Eckhauser, M. L. Photodynamic therapy of esophageal carcinoma. Surg.Endosc. 4[3], 150-153. 1990. EXC - Population with squamous cell carcinoma

Ortner, M. A., Zumbusch, K., Liebetruh, J., Ebert, B., Fleige, B., Dietel, M., and Lochs, H. Is topical delta-aminolevulinic acid adequate for photodynamic therapy in Barrett's esophagus? A pilot study. 20021122. Endoscopy 34[8], 611-616. 2002. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Overholt, B. F. and Panjehpour, M. Barrett's esophagus: photodynamic therapy for ablation of dysplasia, reduction of specialized mucosa, and treatment of superficial esophageal cancer. 19951102. Gastrointestinal Endoscopy 42[1], 64-70. 1995. MEDLINE
MEDLINE. EXC - Updated by Overholt 1999

Overholt, B. F. and Panjehpour, M. Photodynamic therapy for Barrett's esophagus. 19970611. Gastrointestinal Endoscopy Clinics of North America 7[2], 207-220. 1997. MEDLINE
MEDLINE. EXC - Updated by Overholt 1999

Overholt, B. F., Panjehpour, M., and Ayres, M. Photodynamic therapy for Barrett's esophagus: cardiac effects. Lasers Surg.Med. 21[4], 317-320. 1997. EXC - Updated by Overholt 1999

Overholt, B. F. and Panjehpour, M. Photodynamic therapy for Barrett's esophagus: clinical update. 19961017. American Journal of Gastroenterology 91[9], 1719-1723. 1996. MEDLINE
MEDLINE. EXC - Updated by Overholt 1999

Overholt, B. F., Panjehpour, M., Tefftellar, E., and Rose, M. Photodynamic therapy for treatment of early adenocarcinoma in Barrett's esophagus. Gastrointestinal Endoscopy 39[1], 73-76. 1993. EXC - Case reports

Overholt, B. F. and Panjehpour, M. Photodynamic therapy in Barrett's esophagus. *Journal of Clinical Laser Medicine and Surgery* 14[5], 245-249. 1996. EXC - Updated by Overholt 1999

Overholt, B. F. and Panjehpour, M. Photodynamic therapy in Barrett's esophagus: reduction of specialized mucosa, ablation of dysplasia, and treatment of superficial esophageal cancer. 19951121. *Seminars in Surgical Oncology* 11[5], 372-376. 1995. MEDLINE
MEDLINE. EXC - Updated by Overholt 1999

Oyama, T., Tomori, A., Hotta, K., Morita, S., Kominato, K., Tanaka, M., and Miyata, Y. Endoscopic submucosal dissection of early esophageal cancer. *Clinical Gastroenterology and Hepatology* 3[7 SUPPL.], S67-S70. 2005. EXC - ESD, not EMR (based on abstract).

Pagani, M., Granelli, P., Chella, B., Antoniazzi, L., Bonavina, L., and Peracchia, A. Barrett's esophagus: combined treatment using argon plasma coagulation and laparoscopic antireflux surgery. 20040525. *Diseases of the Esophagus* 16[4], 279-283. 2003. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Panjehpour, M., Overholt, B. F., Phan, M. N., and Haydek, J. M. Optimization of light dosimetry for photodynamic therapy of Barrett's esophagus: efficacy vs. incidence of stricture after treatment. 20050524. *Gastrointestinal Endoscopy* 61[1], 13-18. 2005. MEDLINE
MEDLINE. EXC - at GDG2 - no relevant added value to KCQ (light intensity)

Panjehpour, M., Coppola, D., Overholt, B. F., Vo-Dinh, T., and Overholt, S. Photodynamic therapy of Barrett's esophagus: ablation of Barrett's mucosa and reduction in p53 protein expression after treatment. 20080415. *Anticancer Research* 28[1B], 485-489. 2008.
MEDLINE
MEDLINE. EXC - studying p53 expression

Panjehpour, M., Overholt, B. F., Haydek, J. M., and Lee, S. G. Results of photodynamic therapy for ablation of dysplasia and early cancer in Barrett's esophagus and effect of oral steroids on stricture formation. *Am.J Gastroenterol* 95[9], 2177-2184. 2000. EXC - at GDG2 - no relevant added value to KCQ (steroid addition to PDT)

Patrice, T., Foultier, M. T., Yactayo, S., Adam, F., Galmiche, J. P., Douet, M. C., and Le, Bodic L. Endoscopic photodynamic therapy with hematoporphyrin derivative for primary treatment of gastrointestinal neoplasms in inoperable patients. *Dig.Dis Sci.* 35[5], 545-552. 1990. EXC - Oesophageal squamous cell carcinoma

Pech, O., May, A., Gossner, L., Vieth, M., Trump, F., Stolte, M., and Ell, C. Early stage adenocarcinoma of the esophagus arising in circular heterotopic gastric mucosa treated by endoscopic mucosal resection. 20011205. *Gastrointestinal Endoscopy* 54[5], 656-658. 2001. MEDLINE. EXC - type II lesion, >20mm.

Pech, O., May, A., Rabenstein, T., Gossner, L., and Ell, C. Endoscopic resection in neoplastic lesions of the oesophagus. 20040429. *Langenbecks Archives of Surgery* 388[6], 421-424. 2003. MEDLINE. EXC - narrative review. Checked references.

Pech, O., Gossner, L., May, A., Vieth, M., Stolte, M., and Ell, C. Endoscopic resection of superficial esophageal squamous-cell carcinomas: Western experience. 20040816. *American Journal of Gastroenterology* 99[7], 1226-1232. 2004. MEDLINE. EXC - squamous cell carcinomas

Pedrazzani, C., Catalano, F., Festini, M., Zerman, G., Tomezzoli, A., Ruzzenente, A., Guglielmi, A., and de Manzoni G. Endoscopic ablation of Barrett's esophagus using high power setting argon plasma coagulation: a prospective study. 20050511. *World Journal of Gastroenterology* 11[12], 1872-1875. 28-3-2005. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Pereira-Lima, J. C., Busnello, J. V., Saul, C., Toneloto, E. B., Lopes, C. V., Rynkowski, C. B., and Blaya, C. High power setting argon plasma coagulation for the eradication of Barrett's esophagus. *American Journal of Gastroenterology* 95[7], 1661-1668. 2000. EXC - Population only with 1/33 HGD, 14 LGD and 18 non-dysplastic BO

Peters, F. P., Krishnadath, K. K., Rygiel, A. M., Curvers, W. L., Rosmolen, W. D., Fockens, P., Ten Kate, F. J., van Baal, J. W., and Bergman, J. J. Stepwise radical endoscopic resection of the complete Barrett's esophagus with early neoplasia successfully eradicates pre-existing genetic abnormalities. 20071030. *American Journal of Gastroenterology* 102[9], 1853-1861. 2007. MEDLINE. EXC - Studying Biomarkers

Pichon, Riviere A., Augustovski, F., Garcia, Marti S., Glujovsky, D., Lopez, A., and Regueiro, A. Argon plasma usefulness for the treatment of gastrointestinal lesions. Ciudad de Buenos Aires: Institute for Clinical Effectiveness and Health Policy (IECS) . 2005. Argentina. EXC - not available.

Pinotti, A. C., Ceconello, I., Filho, F. M., Sakai, P., Gama-Rodrigues, J. J., and Pinotti, H. W. Endoscopic ablation of Barrett's esophagus using argon plasma coagulation: a prospective study after fundoplication. 20050222. *Diseases of the Esophagus* 17[3], 243-246. 2004. MEDLINE
MEDLINE. EXC - not HGD.

Pouw, R. E., Gondrie, J. J., Sondermeijer, C. M., Ten Kate, F. J., van Gulik, T. M., Krishnadath, K. K., Fockens, P., Weusten, B. L., and Bergman, J. J. Eradication of Barrett esophagus with early neoplasia by radiofrequency ablation, with or without endoscopic resection. 20090130. *Journal of Gastrointestinal Surgery* 12[10], 1627-1636. 2008. MEDLINE
MEDLINE. EXC - combines 3 different studies - looked at the primary studies

Pouw, R. E., Gondrie, J. J., Curvers, W. L., Sondermeijer, C. M., Ten Kate, F. J., and Bergman, J. J. Successful balloon-based radiofrequency ablation of a widespread early squamous cell carcinoma and high-grade dysplasia of the esophagus: a case report. 20090106. *Gastrointestinal Endoscopy* 68[3], 537-541. 2008. MEDLINE
MEDLINE. EXC - case report

Prasad, G. A., Wang, K. K., Halling, K. C., Buttar, N. S., Wongkeesong, L. M., Zinsmeister, A. R., Brankley, S. M., Westra, W. M., Lutzke, L. S., Borkenhagen, L. S., and Dunagan, K. Correlation of histology with biomarker status after photodynamic therapy in Barrett esophagus. 20080910. *Cancer* 113[3], 470-476. 1-8-2008. MEDLINE
MEDLINE. EXC - Study of biomarkers

Prasad, G. A., Wang, K. K., Halling, K. C., Buttar, N. S., Wongkeesong, L., Zinsmeister, A. R., Brankley, S. M., Fritcher, E. G. B., Westra, W. M., Krishnadath, K. K., Lutzke, L. S., and Borkenhagen, L. S. Utility of Biomarkers in Prediction of Response to Ablative Therapy in Barrett's Esophagus. *Gastroenterology* 135[2], 370-379. 2008. EXC - Study of biomarkers

Radu, A., Grosjean, P., Fontolliet, Ch, Wagnieres, G., Woodtli, A., van den Bergh, H., and Monnier, Ph. Photodynamic therapy for 101 early cancers of the upper aerodigestive tract, the esophagus, and the bronchi: A single-institution experience. *Diagnostic and Therapeutic Endoscopy* 5[3], 145-154. 1999. EXC - squamous cell carcinoma.

Ragunath, K., Krasner, N., Raman, V. S., Haqqani, M. T., Phillips, C. J., and Cheung, I. Endoscopic ablation of dysplastic Barrett's oesophagus comparing argon plasma coagulation and photodynamic therapy: a randomized prospective trial assessing efficacy and cost-effectiveness. 20051107. *Scandinavian Journal of Gastroenterology* 40[7], 750-758. 2005. MEDLINE
MEDLINE. EXC - at GDG2 - very poor quality study

Regula, J., MacRobert, A. J., Gorchein, A., Buonaccorsi, G. A., Thorpe, S. M., Spencer, G. M., Hatfield, A. R., and Bown, S. G. Photosensitisation and photodynamic therapy of oesophageal, duodenal, and colorectal tumours using 5 aminolaevulinic acid induced protoporphyrin IX--a pilot study. 19950418. *Gut* 36[1], 67-75. 1995. MEDLINE
MEDLINE. EXC - Squamous cell carcinoma of the GIT.

Resano, C. H., Cabrera, N., Gonzalez, Cueto D., Sanchez Basso, A. E., and Rubio, H. H. Double early epidermoid carcinoma of the esophagus in columnar epithelium. 19850620. *Endoscopy* 17[2], 73-75. 1985. MEDLINE. EXC - oesophagectomy, not endoscopic therapy.

Richards, W. O., Houston, H. L., Torquati, A., Khaitan, L., Holzman, M. D., and Sharp, K. W. Paradigm shift in the management of gastroesophageal reflux disease. 20030617. *Annals of Surgery* 237[5], 638-647. 648. MEDLINE
MEDLINE. EXC - not relevant population or intervention.

Romagnoli, R., Collard, J. M., Gutschow, C., Yamusah, N., and Salizzoni, M. Outcomes of dysplasia arising in Barrett's esophagus: a dynamic view. 20030930. *Journal of the American College of Surgeons* 197[3], 365-371. 2003. MEDLINE. EXC - oesophagectomy, not endoscopic therapy.

Roorda, A. K., Marcus, S. N., and Triadafilopoulos, G. Early experience with radiofrequency energy ablation therapy for Barrett's esophagus with and without dysplasia. 20080227. *Diseases of the Esophagus* 20[6], 516-522. 2007. MEDLINE
MEDLINE. EXC - Population of 13 but HGD in only 3

Rosch, T., Sarbia, M., Schumacher, B., Deinert, K., Frimberger, E., Toermer, T., Stolte, M., and Neuhaus, H. Attempted endoscopic en bloc resection of mucosal and submucosal tumors using insulated-tip knives: a pilot series. 20050107. *Endoscopy* 36[9], 788-801. 2004. MEDLINE. EXC - Mixed population - only 13/38 with oesophageal cancers

Ruol, A., Merigliano, S., Baldan, N., Santi, S., Petrin, G. F., Bonavina, L., Ancona, E., and Peracchia, A. Prevalence, management and outcome of early adenocarcinoma (pT1) of the esophago-gastric junction. Comparison between early cancer in Barrett's esophagus (type I) and early cancer of the cardia (type II). 19971014. *Diseases of the Esophagus* 10[3], 190-195. 1997. MEDLINE. EXC - surgical resection, not endoscopic therapy.

Rusch, V. W., Levine, D. S., Haggitt, R., and Reid, B. J. The management of high grade dysplasia and early cancer in Barrett's esophagus. A multidisciplinary problem. 19940913. *Cancer* 74[4], 1225-1229. 15-8-1994. MEDLINE. EXC - surgical resection, not endoscopic therapy.

Saito, Y., Tanaka, T., Andoh, A., Minematsu, H., Hata, K., Tsujikawa, T., Nitta, N., Murata, K., and Fujiyama, Y. Novel biodegradable stents for benign esophageal strictures following endoscopic submucosal dissection. *Digestive Diseases and Sciences* 53[2], 330-333. 2008. EXC - ESD, not EMR (based on abstract).

Salo, J. A., Salminen, J. T., Kiviluoto, T. A., Nemlander, A. T., Juhani, Ramo O., Farkkila, M. A., Kivilaakso, E. O., and Mattila, S. P. Treatment of Barrett's esophagus by endoscopic laser ablation and antireflux surgery. *Annals of Surgery* 227[1], 40-44. 1998. EXC - not HGD (based on abstract).

Sampliner, R. E., Faigel, D., Fennerty, M. B., Lieberman, D., Ippoliti, A., Lewin, K., and Weinstein, W. M. Effective and safe endoscopic reversal of nondysplastic Barrett's esophagus with thermal electrocoagulation combined with high-dose acid inhibition: a multicenter study. 20010809. *Gastrointestinal Endoscopy* 53[6], 554-558. 2001. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Sampliner, R. E., Camargo, L., and Fass, R. Impact of esophageal acid exposure on the endoscopic reversal of Barrett's esophagus. 20020314. American Journal of Gastroenterology 97[2], 270-272. 2002. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Sampliner, R. E. Management of premalignant esophagogastric lesions. Ariz.Med. 39[5], 312-313. 1982. EXC - not effectiveness study. Narrative review. Checked reference list.

Sampliner, R. E., Hixson, L. J., Fennerty, M. B., and Garewal, H. S. Regression of Barrett's esophagus by laser ablation in an anacid environment. Digestive Diseases and Sciences 38[2], 365-368. 1993. EXC - not HGD (based on abstract).

Sampliner, R. E., Fennerty, B., and Garewal, H. S. Reversal of Barrett's esophagus with acid suppression and multipolar electrocoagulation: preliminary results. 19970304. Gastrointestinal Endoscopy 44[5], 532-535. 1996. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

Satodate, H., Inoue, H., Fukami, N., Shiokawa, A., and Kudo, S. E. Squamous reepithelialization after circumferential endoscopic mucosal resection of superficial carcinoma arising in Barrett's esophagus. 20050506. Endoscopy 36[10], 909-912. 2004. MEDLINE. EXC - case report

Savary, J. F., Monnier, P., Fontollet, C., Mizeret, J., Wagnieres, G., Braichotte, D., and van den Bergh, H. Photodynamic therapy for early squamous cell carcinomas of the esophagus, bronchi, and mouth with m-tetra (hydroxyphenyl) chlorin. Arch.Otolaryngol.Head Neck Surg. 123[2], 162-168. 1997. EXC - not relevant population (based on abstract).

Savary, J. F., Grosjean, P., Monnier, P., Fontollet, C., Wagnieres, G., Braichotte, D., and van den Bergh, H. Photodynamic therapy of early squamous cell carcinomas of the esophagus: a review of 31 cases. Endoscopy 30[3], 258-265. 1998. EXC - studying squamous cell carcinoma

Savoy, A. D., Wolfsen, H. C., Raimondo, M., Woodward, T. A., Noh, K., Pungpapong, S., Hemminger, L. L., and Wallace, M. B. The role of surveillance endoscopy and endosonography after endoscopic ablation of high-grade dysplasia and carcinoma of the esophagus. 20080408. Diseases of the Esophagus 21[2], 108-113. 2008. MEDLINE
MEDLINE. EXC - Studying EMR as part of surveillance post PDT

Schnell, T. G., Sontag, S. J., Chejfec, G., Aranha, G., Metz, A., O'Connell, S., Seidel, U. J., and Sonnenberg, A. Long-term nonsurgical management of Barrett's esophagus with high-grade dysplasia. Gastroenterology 120[7], 1607-1619. 2001. EXC - looking at surveillance of BO patients

Schoefl, R. and Schiller, D. Endoscopic treatment of dysplasia and early cancer of the esophagus: Who, when and how? European Surgery - Acta Chirurgica Austriaca 39[5], 281-287. 2007. EXC - not systematic review. Checked references for relevant studies.

Schroder, W., Wirths, K., Gutschow, C., Vallbohmer, D., Bludau, M., Schumacher, B., Neuhaus, H., and Holscher, A. H. Transthoracic esophagectomy after endoscopic mucosal resection in patients with early esophageal carcinoma. 20090605. Journal of Gastrointestinal Surgery 13[2], 223-229. 2009. MEDLINE. EXC - comparison of histopathologic results, not EMR with curative intent.

Schulz, H., Miehke, S., Antos, D., Schentke, K. U., Vieth, M., Stolte, M., and Bayerdorffer, E. Ablation of Barrett's epithelium by endoscopic argon plasma coagulation in combination with high-dose omeprazole. 20000830. Gastrointestinal Endoscopy 51[6], 659-663. 2000. MEDLINE
MEDLINE. EXC - not HGD.

Seewald, S., Ang, T. L., and Soehendra, N. Endoscopic mucosal resection of Barrett's oesophagus containing dysplasia or intramucosal cancer. *Postgrad.Med.J* 83[980], 367-372. 2007. EXC - narrative review

Shah, A. K., Wolfsen, H. C., Hemminger, L. L., Shah, A. A., and DeVault, K. R. Changes in esophageal motility after porfimer sodium photodynamic therapy for Barrett's dysplasia and mucosal carcinoma. 20070109. *Diseases of the Esophagus* 19[5], 335-339. 2006. MEDLINE MEDLINE. EXC - Describing motility changes

Shami, V. M., Villaverde, A., Stearns, L., Chi, K. D., Kinney, T. P., Rogers, G. B., Dye, C. E., and Waxman, I. Clinical impact of conventional endosonography and endoscopic ultrasound-guided fine-needle aspiration in the assessment of patients with Barrett's esophagus and high-grade dysplasia or intramucosal carcinoma who have been referred for endoscopic ablation therapy. 20060622. *Endoscopy* 38[2], 157-161. 2006. MEDLINE MEDLINE. EXC - not assessment of treatment effectiveness, but staging.

Shand, A., Dallal, H., Palmer, K., Ghosh, S., and MacIntyre, M. Adenocarcinoma arising in columnar lined oesophagus following treatment with argon plasma coagulation [6] (multiple letters). *Gut* 48[4], 580-581. 2001. EXC - not HGD. Case report of patient with LGD.

Sharma, P., Wani, S., Weston, A. P., Bansal, A., Hall, M., Mathur, S., Prasad, A., and Sampliner, R. E. A randomised controlled trial of ablation of Barrett's oesophagus with multipolar electrocoagulation versus argon plasma coagulation in combination with acid suppression: long term results. 20060921. *Gut* 55[9], 1233-1239. 2006. MEDLINE MEDLINE. EXC - not HGD.

Sharma, P., Bhattacharyya, A., Garewal, H. S., and Sampliner, R. E. Durability of new squamous epithelium after endoscopic reversal of Barrett's esophagus. 19991013. *Gastrointestinal Endoscopy* 50[2], 159-164. 1999. MEDLINE MEDLINE. EXC - not HGD. Four patients had LGD, no HGD reported.

Sharma, V. K., Kim, H. J., Das, A., Dean, P., DePetris, G., and Fleischer, D. E. A prospective pilot trial of ablation of Barrett's esophagus with low-grade dysplasia using stepwise circumferential and focal ablation (HALO system). 20080729. *Endoscopy* 40[5], 380-387. 2008. MEDLINE MEDLINE. EXC - not HGD (based on abstract).

Sharma, V. K., Wang, K. K., Overholt, B. F., Lightdale, C. J., Fennerty, M. B., Dean, P. J., Pleskow, D. K., Chuttani, R., Reymunde, A., Santiago, N., Chang, K. J., Kimmey, M. B., and Fleischer, D. E. Balloon-based, circumferential, endoscopic radiofrequency ablation of Barrett's esophagus: 1-year follow-up of 100 patients. *Gastrointest Endosc* 65[2], 185-195. 2007. EXC - not HGD (based on abstract).

Shimizu, Y., Kato, M., Yamamoto, J., Nakagawa, S., Komatsu, Y., Tsukagoshi, H., Fujita, M., Hosokawa, M., and Asaka, M. Endoscopic clip application for closure of esophageal perforations caused by EMR. *Gastrointestinal Endoscopy* 60[4], 636-639. 2004. EXC - not able to determine if relevant population (only 3 had adenocarcinoma, other 181 had squamous cell carcinoma). Also focus on repair of perforation, not effectiveness of EMR.

Shimizu, Y., Tsukagoshi, H., Fujita, M., Hosokawa, M., Watanabe, A., Kawabori, S., Kato, M., Sugiyama, T., and Asaka, M. Head and neck cancer arising after endoscopic mucosal resection for squamous cell carcinoma of the esophagus. 20030701. *Endoscopy* 35[4], 322-326. 2003. MEDLINE. EXC - squamous cell carcinoma.

Shimizu, Y., Tsukagoshi, H., Fujita, M., Hosokawa, M., Kato, M., and Asaka, M. Metachronous squamous cell carcinoma of the esophagus arising after endoscopic mucosal resection. 20010927. *Gastrointestinal Endoscopy* 54[2], 190-194. 2001. MEDLINE. EXC - squamous cell carcinoma.

Sibille, A., Lambert, R., Souquet, J. C., Sabben, G., and Descos, F. Long-term survival after photodynamic therapy for esophageal cancer. *Gastroenterology* 108[2], 337-344. 1995. EXC - Advanced carcinoma of the oesophagus.

Sou, S., Nomura, H., Takaki, Y., Nagahama, T., Matsubara, F., Matsui, T., and Yao, T. Hemorrhagic duodenal lipoma managed by endoscopic resection. 20060801. *Journal of Gastroenterology & Hepatology* 21[2], 479-481. 2006. MEDLINE. EXC - duodenal carcinoma.

Spinelli, P., Dal, Fante M., and Mancini, A. Current role of laser and photodynamic therapy in gastrointestinal tumors and analysis of a 10-year experience. 19920828. *Seminars in Surgical Oncology* 8[4], 204-213. 1992. MEDLINE. EXC - Mixed population with only 2 oesophageal adenocarcinomas out of 311 lesions

Spinelli, P., Mancini, A., and Dal, Fante M. Endoscopic treatment of gastrointestinal tumors: indications and results of laser photocoagulation and photodynamic therapy. *Semin Surg Oncol* 11[4], 307-318. 1995. EXC - population of 33 with upper GI cancer but only 2 with oesophageal cancer from Barrett's origin

Stepinac, T., Grosjean, P., Woodtli, A., Monnier, P., van den Bergh, H., and Wagnieres, G. Optimization of the diameter of a radial irradiation device for photodynamic therapy in the esophagus. 20020702. *Endoscopy* 34[5], 411-415. 2002. MEDLINE
MEDLINE. EXC - not effectiveness of intervention.

Stringer, M. R., Kelty, C. J., Ackroyd, R., and Brown, S. B. Light dosimetry measurements during ALA-PDT of Barrett's oesophagus. *Photodiagnosis and Photodynamic Therapy* 3[1], 19-26. 2006. EXC - not assessment of effectiveness.

Suzuki, H., Miho, O., Watanabe, Y., Kohyama, M., and Nagao, F. Endoscopic laser therapy in the curative and palliative treatment of upper gastrointestinal cancer. 19890713. *World Journal of Surgery* 13[2], 158-164. 1989. MEDLINE. EXC - cases of upper GI cancer in Japan

Sylantiev, C., Schoenfeld, N., Mamet, R., Groozman, G. B., and Drory, V. E. Acute neuropathy mimicking porphyria induced by aminolevulinic acid during photodynamic therapy. *Muscle and Nerve* 31[3], 390-393. 2005. EXC - not HGD. Case report with no reported dysplasia.

Tajiri, H. and Oguro, Y. Laser endoscopic treatment for upper gastrointestinal cancers. 19911216. *Journal of Laparoendoscopic Surgery* 1[2], 71-78. 1991. MEDLINE. EXC - No information on the type of cancer

Tajiri, H., Daikuzono, N., Joffe, S. N., and Oguro, Y. Photoradiation therapy in early gastrointestinal cancer. 19870609. *Gastrointestinal Endoscopy* 33[2], 88-90. 1987. MEDLINE. EXC - Tumor was not staged. No information on tumor.

Takahashi, K., Yoshida, H., Mamada, Y., Tani, N., Nakamura, Y., Mizuguchi, Y., Miyashita, M., Nomura, T., Makino, H., and Tajiri, T. A case report of metachronous hepatocellular carcinoma and early esophageal cancer. *Journal of Nippon Medical School* 72[3], 187-190. 2005. EXC - squamous cell carcinoma.

Takeo, Y., Yoshida, T., Shigemitsu, T., Yanai, H., Hayashi, N., and Okita, K. Endoscopic mucosal resection for early esophageal cancer and esophageal dysplasia. 20011011. *Hepato-Gastroenterology* 48[38], 453-457. 2001. MEDLINE. EXC - Mixed population only 8 out of 35 dysplastic lesions of oesophagus in Japan

Takeshita, K., Tani, M., Inoue, H., Saeki, I., Hayashi, S., Honda, T., Kando, F., Saito, N., and Endo, M. Endoscopic treatment of early oesophageal or gastric cancer. 19970602. *Gut* 40[1], 123-127. 1997. MEDLINE. EXC - Mixed population - only 56 out of 113 oesophageal cancer in Japan

Tan, W. C., Fulljames, C., Stone, N., Dix, A. J., Shepherd, N., Roberts, D. J. H., Brown, S. B., Krasner, N., and Barr, H. Photodynamic therapy using 5-aminolaevulinic acid for oesophageal adenocarcinoma associated with Barrett's metaplasia. *Journal of Photochemistry and Photobiology B: Biology* 53[1-3], 75-80. 1999. EXC - Mixed population including grade 2A cancers

Tang, S. J., Tang, L., and Jazrawi, S. F. Circumferential endoscopic mucosal resection of a 14-cm Barrett's dysplasia with the Duetto mucosectomy device (with videos). 20090217. *Gastrointestinal Endoscopy* 68[4], 786-789. 2008. MEDLINE. EXC - Case report

Thomas, T., Richards, C. J., de Caestecker, J. S., and Robinson, R. J. High-grade dysplasia in Barrett's oesophagus: Natural history and review of clinical practice. *Alimentary Pharmacology and Therapeutics* 21[6], 747-755. 2005. EXC - Paper looking at various forms of therapy for HGD in BO - including surgery, surveillance and ablative - not answering KCQ

Tian, M. E., Qui, S. L., and Ji, Q. Preliminary results of hematoporphyrin derivative-laser treatment for 13 cases of early esophageal carcinoma. *Adv.Exp Med.Biol.* 193, 21-25. 1985. EXC - Patients had squamous cell carcinoma and no staging of tumour.

Tigges, H., Fuchs, K. H., Maroske, J., Fein, M., Freys, S. M., Muller, J., and Thiede, A. Combination of endoscopic argon plasma coagulation and antireflux surgery for treatment of Barrett's esophagus. 20010830. *Journal of Gastrointestinal Surgery* 5[3], 251-259. 2001. MEDLINE
MEDLINE. EXC - not HGD.

Todd, J. A., Basu, K. K., and de Caestecker, J. S. Normalization of oesophageal pH does not guarantee control of duodenogastro-oesophageal reflux in Barrett's oesophagus. *Alimentary Pharmacology and Therapeutics* 21[8], 969-975. 2005. EXC - not HGD. Same population as Basu 2002.

Upton, M. P., Nishioka, N. S., Ransil, B. J., Rosenberg, S. J., Puricelli, W. P., Zwas, F. R., and Shields, H. M. Multilayered epithelium may be found in patients with Barrett's epithelium and dysplasia or adenocarcinoma. 20070130. *Digestive Diseases & Sciences* 51[10], 1783-1790. 2006. MEDLINE
MEDLINE. EXC - looking at whether MLE is a prognostic factor for BO

Van Blankenstein M., Dees, J., and Van Velthuysen, M. L. F. Carcinoma of Barrett's oesophagus in a patient unfit for surgery. *Illustrated Case Reports in Gastroenterology* 4[1], 13-17. 1997. EXC - case report

Van Laethem, J. L., Cremer, M., Peny, M. O., Delhaye, M., and Deviere, J. Eradication of Barrett's mucosa with argon plasma coagulation and acid suppression: immediate and mid term results. *Gut* 43[6], 747-751. 1998. EXC - not HGD.

Van Laethem, J. L., Peny, M. O., Salmon, I., Cremer, M., and Deviere, J. Intramucosal adenocarcinoma arising under squamous re-epithelialisation of Barrett's oesophagus. 20000428. *Gut* 46[4], 574-577. 2000. MEDLINE
MEDLINE. EXC - not HGD (based on abstract).

van Veen, R. L., Aalders, M. C., Pasma, K. L., Siersema, P. D., Haringsma, J., van, de, V, Gabeler, E. E., Robinson, D. J., and Sterenborg, H. J. In situ light dosimetry during photodynamic therapy of Barrett's esophagus with 5-aminolevulinic acid. 20030409. *Lasers in Surgery & Medicine* 31[5], 299-304. 2002. MEDLINE
MEDLINE. EXC - Dosimetry study for PDT

Velanovich, V. Endoscopic endoluminal radiofrequency ablation of Barrett's esophagus: initial results and lessons learned. *Surg.Endosc.* 23[10], 2175-2180. 2009. EXC - Only 12 out of 66

patients with high grade dysplasia with the rest with low grade dysplasia or indeterminate dysplasia

Wahab, P. J., Mulder, C. J., den Hartog G., and Thies, J. E. Argon plasma coagulation in flexible gastrointestinal endoscopy: pilot experiences. *Endoscopy* 29[3], 176-181. 1997. EXC - patients with obstructing tumours. Not relevant population.

Wang, K. K. and Sampliner, R. E. Updated guidelines 2008 for the diagnosis, surveillance and therapy of Barrett's esophagus. *American Journal of Gastroenterology* 103[3], 788-797. 2008. EXC - guidelines based on a literature search, but no details of methods used. Checked references for relevant studies.

Wehrmann, T., Martchenko, K., Nakamura, M., Riphaut, A., and Stergiou, N. Endoscopic resection of submucosal esophageal tumors: a prospective case series. 20050107. *Endoscopy* 36[9], 802-807. 2004. MEDLINE. EXC - population with advanced submucosal cancers

Weston, A. P., Sharma, P., Banerjee, S., Mitreva, D., and Mathur, S. Visible endoscopic and histologic changes in the cardia, before and after complete Barrett's esophagus ablation. 20050908. *Gastrointestinal Endoscopy* 61[4], 515-521. 2005. MEDLINE MEDLINE. EXC - Mixed population with 50/ 82 having non-dysplastic or LGD BO

Wolfsen, H. C. and Ng, C. S. Cutaneous consequences of photodynamic therapy. *Cutis* 69[2], 140-142. 2002. EXC - Mixed population with advanced gastric cancers

Wolfsen, H. C., Hemminger, L. L., and DeVault, K. R. Recurrent Barrett's esophagus and adenocarcinoma after esophagectomy. 20050503. *BMC Gastroenterology* 4, 18. 25-8-2004. MEDLINE MEDLINE. EXC - not effectiveness of ablative therapy.

Wong, Angela, Goh, Jason, and Fitzgerald, Rebecca C. Treatment of Barrett's Oesophagus. *Cochrane Database of Systematic Reviews: Protocols* [2]. 2002. John Wiley & Sons, Ltd. EXC - protocol only. Pre 2004. No review yet published.

Wu, K.-L., Tsao, W.-L., and Shyu, R.-Y. Low-power laser therapy for gastrointestinal neoplasia. *Journal of Gastroenterology* 35[7], 518-523. 2000. EXC - Population of 29 malignant cases and only 3 with adenocarcinoma of the oesophagus

Yang, G. R., Zhao, L. Q., Li, S. S., Qiu, S. L., Wang, Y. M., and Jia, J. H. Endoscopic Nd:YAG laser therapy in patients with early superficial carcinoma of the esophagus and the gastric cardia. 19950323. *Endoscopy* 26[8], 681-685. 1994. MEDLINE. EXC - population of 33, only 5 relevant with adenocarcinoma of esophagus

Yokoyama, A., Ohmori, T., Muramatsu, T., Yokoyama, T., Okuyama, K., Makuuchi, H., Takahashi, H., Higuchi, S., Hayashida, M., Maruyama, K., and Ishii, H. Short-term follow-up after endoscopic mucosectomy of early esophageal cancer and aldehyde dehydrogenase-2 genotype in Japanese alcoholics. *Cancer Epidemiology Biomarkers and Prevention* 7[6], 473-476. 1998. EXC - squamous cell carcinoma.

Yoshimura, F., Sakurai, Y., Furuta, S., Sunagawa, R., Inaba, K., Isogaki, J., Komori, Y., Uyama, I., and Ozawa, S. Lymph node dissection with cervical approach as a salvage surgery for locoregional failure after definitive chemoradiotherapy in a patient with recurrent esophageal carcinoma: Report of a case. *Esophagus* 6[1], 55-61. 2009. EXC - ESD, not EMR (based on abstract).

Yoshinaga, S., Gotoda, T., Kusano, C., Oda, I., Nakamura, K., and Takayanagi, R. Clinical impact of endoscopic submucosal dissection for superficial adenocarcinoma located at the esophagogastric junction. 20080404. *Gastrointestinal Endoscopy* 67[2], 202-209. 2008.

MEDLINE

MEDLINE. EXC - ESD, not EMR (based on abstract).

Yuki, T., Amano, Y., Takahashi, Y., Ose, T., Moriyama, I., Miyake, T., Kushiya, Y., Furuta, K., Ishihara, S., Adachi, K., and Kinoshita, Y. A case report of mucosal Barrett's cancer with vessel involvement, with special reference to indications for endoscopic mucosal ablation therapy. *Esophagus* 3[1], 19-22. 2006. EXC - case report