Table 4: Clinical evidence tables

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Full citation Alcantara, M., Serra-Aracil, X., Falco, J., Mora, L., Bombardo, J., Navarro, S., Prospective, controlled, randomized study of intraoperative colonic lavage versus stent placement in obstructive left-sided colonic cancer, World Journal of Surgery, 35, 1904-1910, 2011 **Ref Id** 833326 **Country/ies where the study was carried out** Spain **Study type**	**Sample size** n= 28 n stent as bridge to surgery (SBTS)= 15 n emergency surgery (ES)= 13 **Characteristics** SBTS, n= 15 Age, years, mean (SD)= 71.9 (8.96) Male, sex, n=5 Duration of obstruction, days, median (IQR)=4 (4) Site of tumour, n Splenic flexure=2 Descending colon=1 Sigmoid colon=11 Rectosigmoid junction=0 Rectum 1/3 sup=1 ASA, n I-II=5 III=8 IV=2	**Interventions** Stent as a bridge to surgery: "In case of complications during stent placement (i.e., perforation or technically impossible to place), emergency surgery was performed. The success of the procedure was defined as the clinical appearance of intestinal transit and the disappearance of the obstruction on abdominal radiography. In the case of stent migration, attempts were made to reinsert it. If successful, this was recorded as a complication but the intervention was still considered as scheduled, as indicated in the protocol. In the case of hemorrhage, conservative treatment was used. The surgery was scheduled for 5-7 days after stent placement."	**Details** Randomisation: Via sealed envelope Blinding: Not possible Outcomes: Complications due to the placement of the stent, surgical time, total and postoperative hospital stay, pathology study of the resection, surgical site infection (superficial, deep, and organ-space), anastomotic dehiscence, postoperative complications (seroma, ileus, evisceration), postoperative reintervention and disease free survival (oncologic relapse) Follow-up: Subsequent controls were performed at surgery outpatient units after 6, 12, 18, 24, 48, and 60 months. Data analysis: "The quantitative variables were described using means and standard deviation when the distribution was considered normal; otherwise, the values of the median, interquartile interval, and range were used. The intention-to-treat analysis included all randomized patients. The per-protocol analysis included all patients receiving stent and scheduled surgery in the stent group and all patients in the emergency surgery group. The statistical analysis of the quantitative variables, with independent groups, was performed with the Student t-test, parametric test, or the nonparametric Mann–Whitney U test. In the statistical analysis of the categorical variables,	**Results** Disease-free survival, event is relapse SBTS= 8/15 ES= 2/13 Kaplan-Meier log-rank test= 0.055 Hospital mortality, n/N SBTS=0/15 ES=1/13 Hospital days, median (IQR) SBTS= 13 (3) ES= 10 (10) p-value= 0.105 Anastomotic leak, n/N SBTS=0/15 ES=4/13 Global-Surgical Site Infection, n/N SBTS=2/15 ES=6/13 Technical success, n SBTS= 15/15	**Limitations** Cochrane risk of bias tool **Selection bias** Random sequence generation: unclear risk (sequence generation not reported) Allocation concealment: unclear risk (not reported) **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible, but unlikely to affect assessment of objective outcomes) **Attrition bias** Incomplete outcome data: low risk (intention to treat analysis and per protocol analysis used) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** High risk of bias: Due to the high rate of anastomotic leak in the emergency surgery group, the study was terminated early (n

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RCT **Aim of the study** The aim of the study was to assess the short-term results and long-term outcomes of patients who underwent stent placement as a bridge to surgery compared to intraoperatice colonic lavage with primary anastomosis. **Study dates** February 2004 to December 2006 **Source of funding** Parc Tauli Foundation	ES, n= 13 Age, years, mean (SD)=71.15 (9) Male, sex, n=7 Duration of obstruction, days, median (IQR)=4 (3) Site of tumour, n Splenic flexure=4 Descending colon=2 Sigmoid colon=4 Rectosigmoid junction=3 Rectum 1/3 sup=0 ASA, n I-II=1 III=9 IV=3 **Inclusion criteria** Over 18 years of age and a diagnosis of complete intestinal obstruction due to tumor in the left colon using an abdominal CT scan **Exclusion criteria**	Emergency surgery: intraoperative colonic lavage (IOCL) with primary anastomosis	Pearson's X^2 test was used. The appearance of oncologic relapse during follow-up, identified either clinically or by CT, was analyzed with the Kaplan-Meier estimation method and the log-rank test. The results of the statistical tests are given for a p value less than 0.05."		included in ITT analysis was 28, but the n originally calculated for statistical power was 42). Interim safety analyses and protocol to terminate early were not pre-specified. **Other information**

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	"Unresectable lesion (intraoperative), severe ischemia or cecal perforation, fecal or advanced purulent peritonitis, hemodynamic instability during surgery, immuno-depressed state (corticoids, chemotherapy, HIV, major surgery in the previous 2 months), and septic shock."				
Full citation Arezzo, A., Balague, C., Targarona, E., Borghi, F., Giraudo, G., Ghezzo, L., Arroyo, A., Sola-Vera, J., De Paolis, P., Bossotti, M., Bannone, E., Forcignano, E., Bonino, M. A., Passera, R., Morino, M., Colonic stenting as a bridge to surgery versus emergency surgery	**Sample size** n= 115 n SBTS= 56 n ES= 59 **Characteristics** SBTS, n=56 Male sex, n= 28 Age, years, mean (range)= 72 (43-90) ASA, n I=12 II=27 III=14 IV=3	**Interventions** Stenting as bridge to surgery (SBTS)= "SEMS placement was performed using a colonoscope with a 4.2-mm operative channel. A hydrophilic guide contained in a five Fr catheter was advanced across the neoplastic stenosis under radiographic control. The catheter was inserted through the stenosis and water-soluble contrast liquid injected above the stenosis to evaluate the	**Details** Randomisation: Centralised web-based data base Blinding: Blinded via unchangeable number-generating software programme Outcomes: Primary outcome - overall morbidity (surgery-related complications within 60 days of surgery). Secondary outcomes - technical success (correct stent placement under radiographic and endoscopic vision), clinical success (resolution of occlusive symptoms by gas and faeces passage), hospital stay (length of hospital stay in days between admission to and discharge from hospital), postoperative complications (any local or systemic complications observed during hospital stay), overall survival (the time from accrual to	**Results** Clinical success in stented patients= 44/56 30-day mortality, n SBTS= 1/56 ES=0/59 Progression-free survival at 3 years, event is progression, relapse or death from any cause SBTS= 17/56 ES= 12/59 Hazard ratio p-value = 0.893 Overall survival at 3 years, event is death from any cause SBTS= 18/56 ES= 16/59	**Limitations** Cochrane risk of bias tool **Selection bias** Random sequence generation: low risk Allocation concealment: low risk **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible, but unlikely to affect assessment of objective outcomes) **Attrition bias**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
for malignant colonic obstruction: results of a multicentre randomised controlled trial (ESCO trial), Surgical Endoscopy and Other Interventional Techniques, 31, 3297-3305, 2017 **Ref Id** 789257 **Country/ies where the study was carried out** Italy **Study type** ESCO trial - Multi-centre RCT **Aim of the study** The aim of the study is to compare morbidity rates after colonic stenting as a bridge to surgery and after emergency surgery to evaluate the efficacy and safety of the two strategies in the management of malignant, left-	ES, n=59 Male sex, n=32 Age, years, mean (range)=71 (44-94) ASA, n I=11 II=28 III=16 IV=4 **Inclusion criteria** "Acute, symptomatic malignant left-sided large-bowel obstruction localised between the splenic flexure and 15 cm from the anal margin, as diagnosed by computed tomography (CT) examination in the emergency room. The main clinical complaint was failure to pass gas and faeces." **Exclusion criteria**	length of the stenosis under fluoroscopic vision. A super stiff guide wire was left in place while the five Fr catheter was retracted. Stents were positioned so as to exceed 1–2 cm from each side of the stenosis. No tumour or stent dilatation was performed... If symptom relief was achieved with stenting, elective surgery was scheduled depending on the patient's clinical conditions and included laparoscopic or laparotomic bowel resection, with or without creation of a protective stoma, according to surgeons' preferences and intra-operative findings." Emergency surgery (ES)= "Surgeons could decide between simple enterostomy and bowel resection based on their experience, the patient's clinical condition, and intra-operative findings." Types of surgery= Hartmann's procedure, subtotal colectomy, washout and anastomosis, colostomy, left colectomy, sigmoidectomy, anterior resection	death from any cause), progression free survival (time from accrual to progression/relapse/death from any cause). Follow up: 60 days for complication outcomes, 3 years for survival data Data analysis: "Fisher's exact test was performed to evaluate the association between any categorical variable and the treatment arm (SBTS/ES), while the Mann–Whitney test was used for continuous variables. OS and PFS curves were estimated by the Kaplan–Meier method and compared using the log-rank test. In both cases, patients still alive were censored at the date of last contact. All reported p values were obtained using a two-sided exact method at the conventional 5% significance level."	Hazard ratio p-value= 0.998 Hospital stay, days, median (range) SBTS= 10 (7-13) ES= 11 (8-15) p= 0.039 During hospital stay Anastomotic leak, n SBTS= 3/56 ES= 2/59 Perforation in stented patients= 5/56 Wound infection, n SBTS= 4/56 ES= 7/59 Stoma immediately after intervention, n SBTS= 11/56 ES= 23/59 Stoma at end of follow up, n SBTS=9/56 ES=15/59 Stent failure (requiring emergency surgery)= 6/56 Technical success in stented patients= 49/56	Incomplete outcome data: low risk (intention to treat analysis used) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
sided large bowel obstruction. **Study dates** 1 March 2008 to 16 November 2015 **Source of funding** European Association for Endoscopic Surgery	"Bowel perforation as diagnosed by clinical exploration and complementary studies, associated conditions contraindicating general anaesthesia and/or haemodynamic instability, impossibility to obtain valid informed consent or refusal by the patient, distant metastases as diagnosed by CT scan at the time of diagnosis"				
Full citation Cheung, H. Y., Chung, C. C., Tsang, W. W., Wong, J. C., Yau, K. K., Li, M. K., Endolaparoscopic approach vs conventional open surgery in the treatment of obstructing left-sided colon cancer: a randomized	**Sample size** n= 48 n stenting as a bridge to surgery (SBTS)= 24 n emergency open surgery (ES)= 24 **Characteristics** SBTS, n=24 Male sex, n= 12	**Interventions** SBTS= "Patients with SEMSs were placed under endoscopic and fluoroscopic guidance by a dedicated endoscopist within 6 hours of the contrast study. more than 1 stent was placed if required. Abdominal radiography was performed the next day following stenting. Preoperative workup for cancer	**Details** Randomsiation: Computer-generated randomisation Allocation: Not reported Outcomes: Primary outcome: successful 1-stage operation. Secondary outcomes: cumulative operative time (sum of the time of all the operations required for a patient); cumulative blood loss; conversion rate; postoperative pain score and analgesic requirement; cumulative length of hospital stay (total number of days spent in the hospital); operative mortality (deaths that occured within 30 days postoperatively); postoperative complications, including	**Results** Technical success in SBTS group= 20/24 Clinical success in SBTS group= 20/24 Hospital stay, day, median (range) SBTS= 13.5 (7-29) ES= 14 (7-55) p-value= 0.7 (Mann-Whitney U test) Anastomotic leak, n SBTS= 0/24 ES= 2/24 Wound infection, n	**Limitations** **Cochrane risk of bias tool** **Selection bias** Random sequence generation: low risk (computer generated) Allocation concealment: unclear risk (not reported) **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible, but unlikely

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
controlled trial, Archives of Surgery, 144, 1127-32, 2009 **Ref Id** 860874 **Country/ies where the study was carried out** China **Study type** RCT **Aim of the study** The aim of the study was to compare self-expanding metal stents with emergency open surgery for the treatment of obstructing left-sided colon cancer. **Study dates** January 2002 to May 2005 **Source of funding** None reported	Age, years, median (range)= 68.5 (27-86) Staging, n I=0 II=7 III=8 IV=9 ES, n=24 Male sex, n=14 Age, years, median (range)=64.5 (39-68) Staging, n I=1 II=7 III=13 IV=3 **Inclusion criteria** Consecutive adult patients (aged >18 years) presentingwith clinical features of left colonic obstruction found between the splenic flexure and rectosigmoid junction. **Exclusion criteria** Considered unfit for operative treatment, had a	staging was carried out, and patients were readmitted for elective laparoscopic- assisted colectomy within 2 weeks after placement of the SEMS. The operation was performed in a standardized manner. The resected specimen with the stent in situ was delivered through a protected muscle-splitting left iliac fossa or Pfannenstiel incision. The anastomosis was constructed intracorporeally using a circular stapler. A loop ileostomy was constructed if the surgeons considered them appropriate. Conversion was defined as extension of the incision to complete the procedure safely for reasons other than specimen retrieval. Patients who had failed decompression by the SEMS underwent emergency open surgery on the same day; operative management was the same as that in the open surgery group." ES= "The Hartmann procedure, primary anastomosis after either subtotal, or total colectomy or segmental	anastomotic leak (clinical or radiological evidence of leakage from the anastomosis); and rates of permanent stoma creation (permanent stoma rates). Follow up: prior to discharge Statistical analysis: "Analysis was performed with the X^2 test, Fisher exact test, t test, or Mann-WhitneyUtest where appropriate. P—— .05 was considered significant. Patients were analyses according to the intention-to-treat principle."	SBTS= 2/24 ES= 8/24 Permanent stoma, n SBTS= 0/24 ES= 6/24	to affect assessment of objective outcomes) **Attrition bias** Incomplete outcome data: low risk (intention to treat analysis and per protocol analysis used) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
	previous laparotomy, had a clinically palpable tumor on abdominal examination.	colectomy with on-table lavage was performed according to the intraoperative findings and the operators' judgment. A defunctioning stoma was constructed if the surgeons considered it appropriate."			
Full citation Fiori, E., Lamazza, A., De Cesare, A., Bononi, M., Volpino, P., Schillaci, A., Cavallaro, A., Cangemi, V., Palliative management of malignant rectosigmoidal obstruction. Colostomy vs. endoscopic stenting. A randomized prospective trial, Anticancer research, 24, 265-268, 2004 **Ref Id** 954359 **Country/ies where the study was carried out**	**Sample size** n= 22 n palliative stent= 11 n colostomy= 11 **Characteristics** Palliative stent, n=11 Male sex, n= 6 Age, mean= 77.2 (3.3) ASA, n I=4 II=6 III=1 Site of obstruction, n Rectum= 7 Sigmoid colon= 4 Palliative stent, n=11 Male sex, n=7 Age, mean (SD)= 76 (4.6) Site of obstruction, n Rectum= 7 Sigmoid colon= 4	**Interventions** Palliative stent= "A self-expanding metallic stent measuring 9-12 cm in length, was passed through the stricture, with distal inner above the proximal tumor margin. The length of the stent was 9 cm in 8 patients and 12 cm in 3 patients. The guidewire was inserted through the channel of the endoscope and its position was confirmed by fluoroscopy. The insertion and deployment of the stent were checked by both endoscopic and fluoroscopic guidance." Colostomy= "Preoperative mechanical bowel preparation could be achieved without complications. A right transverse colostomy was made under general	**Details** Randomsiation: random-number table Allocation: not reported Outcomes: mean operative time, morbidity and mortality rate, canalization of the gastrointestinal tract, restoration of oral intake, median hospital stay. Follow up: prior to discharge Statistical analysis: "The Student's t-test and Fischer's exact test were used when appropriate. All values are expressed as mean±standard deviation of the mean. A p value < 0.05 was set as significant."	**Results** Technical success in palliative stent arm= 11/11 Clinical success in palliative stent arm= 11/11 30-day mortality, n Palliative stent= 0/11 Colostomy= 0/11 Hospital stay, days, median Palliative stent= 2.6 Colostomy= 8.1 p-value < 0.0001	**Limitations** **Cochrane risk of bias tool** **Selection bias** Random sequence generation: unclear risk (random number tables used) Allocation concealment: unclear risk (not reported) **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible, but unlikely to affect assessment of objective outcomes) **Attrition bias** Incomplete outcome data: low risk (intention to treat analysis and per protocol analysis used) **Reporting bias** Selective reporting: high risk (morbidity outcome not pre-defined) **Other bias** **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Italy **Study type** RCT **Aim of the study** The aim of the study was to compare endoscopic stenting with palliative colostomy. **Study dates** January 2001 to May 2003 **Source of funding** Not reported	ASA, n I=5 II=5 III=1 **Inclusion criteria** Patients with advanced unresectable disease, peritoneal carcinomatosis and/or multiple parenchymatous metastatic disease. **Exclusion criteria** Not reported	anaesthesia. All patients were not given oral feedings before stoma opening."			
Full citation Ghazal, A. H. A., El-Shazly, W. G., Bessa, S. S., El-Riwini, M. T., Hussein, A. M., Colonic Endolumenal Stenting Devices and Elective Surgery Versus Emergency Subtotal/Total Colectomy in the Management of	**Sample size** n= 60 Emergency stenting followed by elective resection (ESER)= 30 Total abdominal colectomy and ileorectal anastomosis (TACIR)= 30 **Characteristics**	**Interventions** ESER= "Upfront endoscopic placement, under fluoroscopic guidance, of a colonic stent across the obstruction according to the standard technique described elsewhere. Following successful stent placement, the patient was admitted to a general surgical ward, received a colonic purge, and subsequently	**Details** Randomisation: Pseudorandom number generator Allocation concealment: Individual assignments concealed in sequentially numbered sealed envelopes that were opened in order when assignments were made Outcomes: Postoperative complications, hospital stay Follow up: 3-monthly basis in first post-op year, 6-monthly basis in the first 2 post-op years, annually thereafter Data analysis: "The Mann–Whitney U test and the Student's t test were used for	**Results** Technical success in ESER group= 29/30 Hospital stay, days, median ESER= 13 TACIR= 8 p= 0.102 Anastomotic leak, n ESER= 0/29 TACIR= 1/30 Wound infection, n ESER= 1/29 TACIR= 9/30	**Limitations** Cochrane risk of bias tool **Selection bias** Random sequence generation: low risk Allocation concealment: low risk **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible to blind, but

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Malignant Obstructed Left Colon Carcinoma, Journal of gastrointestinal surgery, 17, 1123-1129, 2013 **Ref Id** 954389 **Country/ies where the study was carried out** Egypt **Study type** RCT **Aim of the study** The aim of the study was to compare stenting for relief of colonic obstruction followed by elective colectomy to total abdominal colectomy and ileorectal anastomosis for management of acute obstructed carcinoma of the left colon. **Study dates**	ESER, n=30 Age, years, median (range)= 52 (37-68) Male sex, n= 12 Location of tumour, n Rectosigmoid=12 Sigmoid colon=14 Descending colon=4 Synchonous tumour=0 TNM stage I=6 II=19 III=5 TACIR, n=30 Age, years, median (range)=51 (35-66) Male sex, n=11 Location of tumour, n Rectosigmoid=10 Sigmoid colon=17 Descending colon=3 Synchonous tumour=1 TNM stage I=7 II=19 III=4 **Inclusion criteria** "Patients presenting with	underwent elective tumor resection and primary anastomosis within 7–10 days of stent placement. Resection options included either a left hemicolectomy or an anterior resection. Full colonoscopy to exclude synchronous lesionsn was attempted in all patients prior to start of surgery." TACIR= "Total abdominal colectomy and ileorectal anastomosis was performed for every patient regardless of age or gender. Laparotomy was performed through a midline incision. The site and nature of left colon obstruction was confirmed, and when necessary, obstructed large bowel was decompressed by insertion of a needle attached to a suction apparatus."	continuous variables. The chi-squared and the Fisher's exact test were used for categorical variables. All P values were two-sided. A P<0.05 was considered statistically significant."		unlikely to affect outcome assessment) **Attrition bias** Incomplete outcome data: unclear risk (intention to treat analysis not used, 1 patient excluded from analysis) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
January 2009 to May 2012 **Source of funding** Not reported	acute left colonic obstruction confirmed by a computed tomography of the abdomen." **Exclusion criteria** "Patients with distal rectal cancer less than 8 cm from the anal verge, patients with signs of peritonitis, and the presence of metastatic disease and/or carcinomatosis."				
Full citation Ho, K. S., Quah, H. M., Lim, J. F., Tang, C. L., Eu, K. W., Endoscopic stenting and elective surgery versus emergency surgery for left-sided malignant colonic obstruction: a prospective randomized trial, International Journal of Colorectal Disease, 27, 355-62, 2012	**Sample size** n= 39 n stenting as a bridge to surgery (SBTS)= 20 n emergency surgery (ES)= 19 **Characteristics** SBTS, n=20 Age, years, median (range)=68 (51-85) Male sex, n=13	**Interventions** Stenting= "Gentle flexible sigmoidoscopy after a rectal enema was performed to confirm the diagnosis of left-sided colonic cancer. The stenosing lesion was stented by a combined endoscopic and fluoroscopic approach performed by or supervised by a consultant colorectal surgeon. Using a double-channel therapeutic endoscope, a guide wire was introduced across	**Details** Randomisation: Computer-generated code Allocation: Sequentially numbered, opaque, sealed envelopes Outcomes: Technical success (successful SEMS placement and deployment), clinical success (colonic decompression within 96 h after successful placement of the stent, with passage of stools and resolution of nausea and vomiting, and confirmed on plain abdominal radiograph). Primary outcome: 60 days postoperative complication rates (any event leading to hospital readmission or prolonging current hospital stay). Secondary outcomes: type of surgery performed, bowel preservation, presence of a stoma, postoperative bowel function, length of	**Results** Clinical success in SBTS= 14/20 30-day mortality, n SBTS= 0/20 ES= 3/19 Hospital stay, median (range) SBTS= 6 (4-28) ES= 8 (6-39) p-value= 0.028 Anastomotic leak, n SBTS=1/20 ES= 0/19 Wound infection, n SBTS= 3/20 ES= 4/19	**Limitations** Cochrane risk of bias tool **Selection bias** Random sequence generation: low risk Allocation concealment: low risk **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible to blind, but unlikely to affect outcome assessment) **Attrition bias**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Ref Id 627052 **Country/ies where the study was carried out** Singapore **Study type** RCT **Aim of the study** The aim of the study was assess the role of colonic stenting as a bridge to surgery in acutely obstructed left-sided colon cancer. **Study dates** October 2004 to February 2008 **Source of funding** Not reported	Location of tumour, n Rectosigmoid colon=5 Sigmoid colon=10 Descending colon=3 Splenic flexure=2 Stage of tumour, n II=7 III=10 IV= 3 ES, n=19 Age, years, median (range)= 65 (49-84) Male sex, n=9 Location of tumour, n Rectosigmoid colon=3 Sigmoid colon=8 Descending colon=6 Splenic flexure=2 Stage of tumour, n II=6 III=5 IV= 7 **Inclusion criteria** "Acute intestinal obstruction secondary to left-	the stenosis and beyond the obstruction; subsequently, water-soluble contrast was injected via a catheter over the guide wire to confirm the intraluminal placement of the guide wire as well as to assess the length of the stenosis. The SEMS was inserted through the endoscope over the guide wire and deployed in place...Patients who had successful stenting and decompression were discharged and readmitted for elective surgery. Elective surgery should preferably take place about 1 to 2 weeks after stenting. Standard preoperative bowel preparation, prophylactic low-molecular-weight heparin, and intravenous antibiotics were administrated as per usual in elective surgery." ES= "As soon as the operating theaters were available after initial stabilization. In both elective and emergency cases, tumor resection followed standard oncologic principles. Surgical options at the discretion of the individual consultant	hospital stay, length of stay in critical care, and hospitalization costs. Follow up: 60 days Statistical analysis: "Mann–Whitney U test for continuous variables and the chi-squared test or Fisher's exact test for categorical variables. Two-sided statistical significance was accepted at the 5% level. Intention to treat analysis was used"	Defunctioning stoma after intervention, n SBTS= 2/20 ES= 6/19 Stoma at the end of 1 year follow up, n SBTS= 1/20 ES= 2/19 Stent failure in SBTS= 6/20 Technical success in SBTS= 14/20	Incomplete outcome data: low risk (intention to treat analysis used) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
	sided colonic cancer" **Exclusion criteria** "Distal rectal cancers <8 cm from the anal verge, signs of peritonitis suggestive of bowel perforation or sepsis demanding urgent surgery"	colorectal surgeon included resection and primary anastomosis, Hartmann's procedure, subtotal or total colectomy, diverting stoma formation, and laparoscopic colectomy."			
Full citation Pirlet, I. A., Slim, K., Kwiatkowski, F., Michot, F., Millat, B. L., Emergency preoperative stenting versus surgery for acute left-sided malignant colonic obstruction: a multicenter randomized controlled trial, Surgical endoscopy, 25, 1814-1821, 2011 **Ref Id** 954720	**Sample size** n= 60 n stenting as a bridge to surgey (SBTS)= 30 n emergency surgery (ES)= 30 **Characteristics** SBTS, n= 30 Age, years, mean (SD)= 70.4 (10.3) Male sex, n=16 Tumour location Rectosigmoid, n= 8 Sigmoid colon, n=15	**Interventions** SBTS= "After the level of obstruction had been confirmed with a water-soluble contrast enema, the SEMS was placed along a guidewire through the lesion under radiologic or endoscopic guidance, as available at each center. Dilation of the obstructive lesion before the stent placement was forbidden. When the SEMS did not cover the entire length of the lesion, a second overlapping stent was placed. A further water-	**Details** Randomisation: computer-generated lists Allocation: Not reported Outcomes: Primary outcome: stoma. Secondary outcome: in-hospital mortality, stent-related morbidity (i.e., bowel perforation), surgical morbidity including both wound complications (hematoma, infections, dehiscence) and intra-abdominal complications (peritonitis, abscess, hemoperitoneum, anastomotic leak), extraabdominal morbidity (pulmonary infection, urinary infection, venous thromboembolism, cardiovascular or neurologic complications), and need for reoperation for whatever reason. Follow up: prior to discharge Statistical analysis: "The chi-square test was used to compare stoma and other qualitative variables (including the center effect)	**Results** Clinical success, n SBTS= 12/30 ES= 16/30 In-hospital mortality, n SBTS= 3/30 ES= 1/30 Hospital stay, days, median (range) SBTS= 23 (9-67) ES= 17 (7-126) p-value= 0.13 Anastomotic leak, n SBTS= 2/30 ES= 2/30 Stoma immediately after intervention, n SBTS= 13/30 ES= 17/30	**Limitations** Cochrane risk of bias tool **Selection bias** Random sequence generation: low risk Allocation concealment: unclear risk (not reported) **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible to blind, but unlikely to affect outcome assessment) **Attrition bias** Incomplete outcome data: low risk (intention to treat analysis used)

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Country/ies where the study was carried out France **Study type** Multi-centre RCT **Aim of the study** The aim of the study was to compare the outcomes of emergency colonic self-expanding metallic stent (SEMS) as a bridge to surgery to emergency surgery alone. **Study dates** December 2002 to October 2006 **Source of funding** Not reported	Descending colon=6 Splenic flexure=0 Not available=1 SBTS, n= 30 Age, years, mean (SD)=74.7 (11.3) Male sex, n=13 Tumour location Rectosigmoid, n=7 Sigmoid colon, n=18 Descending colon=2 Splenic flexure=3 Not available=0 **Inclusion criteria** "Older than 18 years, fit for both emergency surgery and colonic stenting, and presenting with obstructive symptoms, dilation of the colon, and typical abnormalities confirmed by water-soluble contrast enema, computed tomography (CT) scan, or findings at colonoscopy suggesting left-sided malignant	soluble contrast enema was performed to authenticate the accurate positioning of the stent and its efficacy in decompressing the colon. Candidates for elective surgery, after clinical success ofthe procedure, had to undergo surgery within the same hospitalization period. In this group, urgent unplanned surgery was indicated in case of technical failure of stenting, iatrogenic morbidity of SEMS (bowel perforation), or clinical failure, defined as a lack of bowel decompression within the first 3 post-procedure days." ES= "Emergency surgery was performed through laparotomy. Because there is no formal consensus about the gold standard treatment in this setting, the choice of the procedure performed was left to the discretion of the surgeon."	between groups. For quantitative variables, intergroup comparisons used the Student t-test or the Kruskal-Wallis H test depending on normality of distributions, equality of variances, or both. All p values less than or equal to 0.05 were considered statistically significant." Analyses were performed on an intention-to-treat basis.	Perforation in SBTS group= 2/30 Technical success in SBTS group= 14/30	**Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** Low risk: Study protocol defined that the trial should be discontinued if major side effect events related to stenting were observed by the study monitor. "In the inclusion period, two bowel perforations occurred during the stenting procedures, in addition to one perforation in a nonrandomized patient. These major side effects, associated with the unexpected high rate of technical failures, led the steering committee to interrupt the trial after 65 patient inclusions." **Other information**

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	obstruction. Eligibility for the study required that the primary tumor be located between (including) the splenic flexure and the rectosigmoid junction." **Exclusion criteria** "Presenting with obstruction located proximal to the splenic flexure or distal to the rectosigmoid junction who had symptoms suggesting bowel perforation (particularly a cecal diameter exceeding 12 cm), other septic symptoms, abdominal tenderness, spontaneous pneumoperitoneum, adjacent small bowel involvement, or stage 4 tumors. Patients younger				

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
	than 18 years, pregnant, unfit for either strategy, or lacking informed consent also were not eligible for the study."				
Full citation Sloothaak, D. A., van den Berg, M. W., Dijkgraaf, M. G., Fockens, P., Tanis, P. J., van Hooft, J. E., Bemelman, W. A., Oncological outcome of malignant colonic obstruction in the Dutch Stent-In 2 trial, British journal of surgery, 101, 1751-1757, 2014 **Ref Id** 954813 **Country/ies where the study was carried out** **Study type** Follow up study of Dutch Stent-in-2 trial (Van Hooft 2011)	**Sample size** For study details please see Dutch Stent-in-2 trial **Characteristics** **Inclusion criteria** **Exclusion criteria**	**Interventions**	**Details** Follow up protocol: "In the Dutch Stent-In 2 trial, patients were initially followed for at least 6 months after randomization. Prospectively collected patient demographics, treatment characteristics and pathology reports were complemented retrospectively with data on adjuvant treatment, recurrence (locoregional recurrence or distant metastasis) and survival. Information was obtained from hospital medical records and general practitioners. The total follow-up was calculated from the date of randomization in the Stent-In 2 trial" Outcomes: overall and locoregional disease recurrence (intestinal, regional lymph node or peritoneal recurrence), disease-free survival (DFS, the time between resection of the primary tumour and the diagnosis of disease recurrence or death from any cause), disease-specific survival (DSS, the time to cancer-specific death) and overall survival (time to death from any cause) after 4 years. Statistical analysis: "Data were analysed based on the on-treatment principle. Continuous data are presented as median (i.q.r.) and were compared using the Mann–Whitney U test. For dichotomous outcomes, the stent and emergency surgery groups were compared by means of $\chi 2$ or Fisher's	**Results** 4-year DFS, event is diagnosis of disease recurrence or death from any cause SBTS= 13/26 ES= 9/32 Log rank test, p-value= 0.061 4-year OS, event is death from any cause SBTS= 10/26 ES= 10/32 Log-rank test, p-value= 0.468	**Limitations** **Cochrane risk of bias tool** Incomplete outcome data: High risk of bias (69% attrition from the original trial due to patients being excluded due to benign disease, palliative treatment, and 1 withdrawal) For all other domains please see Dutch Stent-in-2 trial (Van Hooft 2011) **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Aim of the study **Study dates** **Source of funding**			exact test. The Kaplan–Meier method was used for survival analysis, with comparison between stent and emergency surgery groups using the log rank test."		
Full citation Tung, K. L., Cheung, H. Y., Ng, L. W., Chung, C. C., Li, M. K., Endo-laparoscopic approach versus conventional open surgery in the treatment of obstructing left-sided colon cancer: long-term follow-up of a randomized trial, Asian journal of endoscopic surgery, 6, 78-81, 2013 **Ref Id** 828879 **Country/ies where the study was carried out** **Study type** Follow up study of Cheung 2009	**Sample size** For study details please see Cheung 2009 **Characteristics** **Inclusion criteria** **Exclusion criteria**	**Interventions**	**Details** Follow up protocol: All patients were followed up at 3-month intervals for the first 3 years, semi-annually in the subsequent 2 years, and yearly from then on. Surveillance colonoscopy was performed 1 year after surgery and every 3 years thereafter if the first colonoscopy was normal; colonoscopy was performed more frequently if the patient's condition indicated otherwise. Outcomes: Rates of curative surgery (no gross macroscopic tumor present clinically or radiologically at the end of surgery), disease recurrence (clinically or radiologically proven recurrence, supported by histological tissue diagnosis whenever possible), overall survival (the time from the date of surgery or SEMS insertion to the date of death or most recent follow-up).	**Results** 5-year disease-free survival, n SBTS= 9/24 ES= 7/24 Log rank test, p= 0.63 5-year overall survival, n SBTS= 12/24 ES= 16/24 Log rank test, p= 0.076	**Limitations** **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Aim of the study **Study dates** **Source of funding**					
Full citation Van Hooft, J. E., Bemelman, W. A., Oldenburg, B., Marinelli, A. W., Holzik, M. F. L., Grubben, M. J., Sprangers, M. A., Dijkgraaf, M. G., Fockens, P., Colonic stenting versus emergency surgery for acute left-sided malignant colonic obstruction: A multicentre randomised trial, The Lancet Oncology, 12, 344-352, 2011 **Ref Id** 954893 **Country/ies where the study was carried out**	**Sample size** n= 98 n stenting as a bridge to surgery (SBTS)=47 n emergency surgery (ES)= 51 **Characteristics** SBTS, n=47 Age, years, mean (SD)=70.4 (11.9) Male sex, n=24 ASA classification, n Unknown=1 1=16 2=24 3=6 Severity of obstruction, n Unknown=1 Incomplete=13 Complete=33 ES, n=51 Age, years, mean (SD)=71.4 (9.7)	**Interventions** SBTS: "If a standard colonoscope or sigmoidoscope could traverse the lesion or the lesion seemed to be benign, stent placement was not done. Dilation of the obstructive lesion before stent placement was forbidden. If stent placement failed or symptoms of colonic obstruction did not resolve within 3 days, patients were treated surgically. Candidates for elective surgery were preferably operated on 5–14 days after inclusion, and no later than 4 weeks after inclusion." ES: "In the emergency surgery group, patients were operated on according to conventional standards. In case of a primary	**Details** Randomisation: computer generated lists Allocation: random number lists were stored centrally on a server at the Academic Medical Centre and were accessible to the local investigator through a web application. When an eligible patient gave informed consent, the local investigator called the principal investigator who accessed the randomised allocation and reported this to the local investigator. Outcomes: Primary outcome: quality of life (QL2 subscale of the EORTC QLQ-C30) at 6-months. Secondary outcomes: mortality (procedure-related mortality within 30 days after intervention and as overall mortality during follow up), morbidity (any event leading to hospital admission or extending hospital stay), stoma rate. Follow up: 6 months. "Morbidity and mortality in the experimental group (colonic stenting) was reported to the data safety monitoring committee (DSMC) on short notice. An interim analysis was scheduled for after the first 60 treated patients completed 30 days of follow-up. No formal stopping rule was formulated beforehand." Statistical analysis: "Quality-of-life scores from available assessments during follow-up	**Results** Technical success in SBTS group= 33/47 Clinical success in SBTS group= 33/47 30-day mortality, n SBTS= 5/47 ES= 5/51 Anastomotic leak, n SBTS= 5/47 ES= 1/51 Perforation (guidewire or stent-related) in SBTS group= 6/47 Wound infection, n SBTS= 2/47 ES= 1/51 Stoma rates Directly after initial intervention, n SBTS= 24/47 ES= 38/51 At latest follow up, n SBTS= 27/47 ES= 34/51 Global health status, QL2 subscale of the EORTC QLQ-C30 (higher scores indicate higher QoL),	**Limitations** **Cochrane risk of bias tool** **Selection bias** Random sequence generation: low risk Allocation concealment: low risk **Performance bias** Blinding of participants and personnel: unclear risk (not possible, potential for bias in subjective quality of life outcomes; unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: unclear risk (not possible, potential for bias in assessment of subjective quality of life outcomes; unlikely to affect assessment of objective outcomes) **Attrition bias** Incomplete outcome data: low risk (intention to treat analysis used) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
The Netherlands **Study type** Multi-centre RCT **Aim of the study** The aim of the study was to compare colonic stenting to emergency surgery for patients with acute malignant colonic obstruction. **Study dates** 9 March 2007 to 27 August 2009. The trial was discontinued prematurely in March 2010 in accordance with advice from the Data Safety Monitoring Board due to interim analyses of the first 60, and then 90 patients, which revealed an increased risk of 30-day mortality for the stent group compared to the emergency surgery group.	Male sex, n=27 ASA classification, n Unknown=1 1=17 2=27 3=6 Severity of obstruction, n Unknown=1 Incomplete=14 Complete=36 **Inclusion criteria** "Aged 18 years or older, had clinical signs of severe colonic obstruction that had existed for less than 1 week, and had dilation of the colon on either plain abdominal radiograph, with typical abnormalities on a gastrografin enema study, or contrast-enhanced CT scan. The imaging modalities had to be compatible with a total or subtotal malignant colonic obstruction, and	colostomy, restoration of bowel continuity was attempted within 3-6 months."	were averaged per patient, and weighted by the length of the preceding period between planned measurements. Missing follow-up data were regarded as missing at random. Unless otherwise stated, differences in (weighted) quality-of-life scores between the emergency surgery and colonic stenting groups were assessed for statistical significance by analysis of covariance to adjust for baseline scores. Differences in procedure-related mortality (at 30 days), overall mortality, morbidity, and stoma rates were assessed by the χ^2 test. Differences in survival were assessed by the Kaplan-Meier log-rank test. All reported p values are two-sided and were judged to be significant at less than 0.05. In accordance with the intention-to-treat principle, patients not treated according to their random assignment, irrespective of the reason, were neither crossed over nor excluded."	SBTS, n= 36 Baseline= 34.0 (23.2) 6 month follow up= 63.0 (23.8) ES, n=39 Baseline= 42.5 (28.0) 6 month follow up= 61.4 (21.9) Between-group difference= -4.7 (-14.8 to 5.5), p=0.36 *Value for emergency surgery during follow-up minus colonic stenting during follow-up, based on estimated marginal means with baseline values as covariates	**Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Source of funding No funding received	obstruction had to be located in the left side of the colon (descending colon, sigmoid, or rectum)." **Exclusion criteria** "Signs of peritonitis, perforation, fever, sepsis, or other serious complications demanding urgent surgery; physical status of class 4 or 5 according to the American Society of Anesthesiologists; obstruction caused by a non-colonic malignancy or a benign disease; distal tumour margin of less than 10 cm from the anal verge; or inability to complete self-report quality-of-life questionnaires."				
Full citation	**Sample size** n= 21	**Interventions** Palliative stent: Patients were treated with the	**Details** Randomisation: computerised randomisation performed centrally in the AMC Amsterdam	**Results** 30-day mortality, n Palliative stent= 2/11	**Limitations** **Cochrane risk of bias tool** **Selection bias**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
van Hooft, J. E., Fockens, P., Marinelli, A. W., Timmer, R., van Berkel, A. M., Bossuyt, P. M., Bemelman, W. A., Early closure of a multicenter randomized clinical trial of endoscopic stenting versus surgery for stage IV left-sided colorectal cancer, Endoscopy, 40, 184-191, 2008 **Ref Id** 954895 **Country/ies where the study was carried out** The Netherlands **Study type** Multi-centre RCT **Aim of the study** The aim of the study was to compare endoluminal stenting with surgical treatment for patients with stage IV colorectal cancer with	n palliative stenting= 11 n palliative surgery= 10 **Characteristics** Palliative stenting, n=11 Age, years, mean (SD), range=61.5 (12.9), 42-88 Male sex, n=4 Site of obstruction, n Rectosigmoid=7 Descending colon=4 Site of metastases, n Lung=6 Liver=11 Bone=1 Lymphatic=3 Others=1 WHO performance score, n WHO 0=3 WHO 1=2 WHO 2=5 WHO 3=1 Palliative surgery, n=10 Age, years, mean (SD), range=67.8 (12.3), 46-81 Male sex, n=7 Site of obstruction, n Rectosigmoid=9	recently introduced WallFlex colonic stent. After preparation of the distal colon with an enema, the colonoscope was introduced up to the site of the obstruction. In cases where the colonoscope was not able to pass, a double-lumen catheter with a guide wire and contrastwas used to pass the stenosis. The length of the stenosis was then assessed fluoroscopically. A stent was chosen which was at least 3 cm longer than the stenosis (1.5 cm at either end). The selected stent was advanced through the endoscope over a guide wire until it passed the proximal end of the stricture; after this the stent was deployed under continuous radiographic control. If the stent did not cover the entire length of the tumor, a second overlapping stent was placed. The correct position of the stent was confirmed using fluoroscopy. The stenosis was not dilated before or directly after stent placement.	Allocation: Not reported Outcomes: Primary outcome: composite outcome of mortality, morbidity and function health status (WHO performance score). Secondary outcomes: effectiveness of palliation (longterm relief of obstructive symptoms), quality of life (EORTC QLQ-C30 version 3, EQ-5D, EQ-VAS), adverse events, costs, and procedural morbidity and mortality. "Serious adverse events were defined as events leading to surgical re-intervention, or events requiring patient admission to the intensive care unit (ICU) for more than 48 hours or causing death. Mild adverse events were events that led to hospital admission or prolonged hospital but which did not fulfil the criteria for severe adverse events." Follow up: death or 1 year after inclusion. An interim analysis was planned after inclusion of 100 patients. Statistical analysis: All analyses were performed on an intention−to−treat principle and included all randomized patients. Statistical significance in all analyses was set at P < 0.05.	Palliative surgery= 0/10 Hospital stay, days, median (IQR) Palliative stent= 12 (0-11.5) Palliative surgery= 11 (5.75-16.75) p-value= 0.46 Perforation < 30 days after stent placement= 2/10 Perforation ≥ 30 days after stent placement= 4/10 Technical success in stent group= 9/10* *One patient did not develop imminent obstruction and did not undergo colonic stenting	Random sequence generation: unclear risk (sequence generation not reported) Allocation concealment: unclear risk (not reported) **Performance bias** Blinding of participants and personnel: low risk (not possible, but unlikely to affect performance on objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible, but unlikely to affect assessment of objective outcomes) **Attrition bias** Incomplete outcome data: low risk (intention to treat analysis and per protocol analysis used) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** An independent data and safety monitoring committee monitored the safety of the participants. **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
imminent obstruction. **Study dates** December 2004 to January 2006. "In January 2006 inclusion was discontinued because of an unusually high number of serious adverse events in the nonsurgical arm ± a possible stent−related perforation had occurred in three of the nine stented patients. After carefully studying all the serious adverse events, the safety monitoring committee advised us to close the study prematurely, from 8 March 2006. The Medical Ethics Committee of the coordinating center approved this closure and all participating hospitals and patients were informed."	Descending colon=1 Site of metastases, n Lung=2 Liver=10 Bone=1 Lymphatic= 0 Others=0 WHO performance score, n WHO 0=3 WHO 1=5 WHO 2=2 WHO 3=0 **Inclusion criteria** Men and women over the age of 18 years with incurable, left-sided colorectal cancer who presented at one of the 29 participating Dutch hospitals...Patients with incurable left−sided colorectal cancer were eligible if the tumor was localized between the splenic flexure and the proximal rectum (distal margin at least 10	Palliative surgery: "The decision on whether a palliative resection or fecal diversion was performed (open or laparoscopic) was made at the discretion of the surgeon. Bowel preparation and preoperative prophylactic antibiotics were given according to the local hospital guidelines. Patients received a regular diet as soon as possible." All patients were offered palliative chemotherapy, which was started as soon as possible after surgical resection or after inclusion in the nonsurgical arm, the regimen at the discretion of the oncologist.			

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Source of funding Governmental subvention (ZonMW) for overhead costs	cm from the anal verge). **Exclusion criteria** Ileus, a Karnofsky performance status (KPS) of less than 50% or an American Society of Anesthesiologists (ASA) class of IV or V.				
Full citation Xinopoulos, D., Dimitroulopoulos, D., Theodosopoulos, T., Tsamakidis, K., Bitsakou, G., Plataniotis, G., Gontikakis, M., Kontis, M., Paraskevas, I., Vassilobpoulos, P., et al.,, Stenting or stoma creation for patients with inoperable malignant colonic obstructions? Results of a study and cost-effectiveness analysis, Surgical endoscopy, 18, 421-426, 2004	**Sample size** n= 30 n palliative stent = 15 n colostomy= 15 **Characteristics** Characteristics not reported separately by treatment group Male sex, n= 16 Age, years, mean (range)= 72.4 (64-87) Primary, n Colorectal= 24 Ovarian= 6 Site of obstruction, n Rectosigmoid colon= 18	**Interventions** Palliative stent= "To obviate any exacerbation of the intestinal obstruction, no oral bowel preparation was performed. All patients were given colonic cleansing. Sedatives (midazolam) and analgesics (pethidine) were administered intravenously. Provide visualization of the distal and proximal end of the stenosis. In all cases, dilation with Savary-Gillard dilators was performed over a stiff-angled metallic guidewire, and the stenosis was dilated to 20 mm under image-intensifier control. After dilation, with the	**Details** Randomisation: Not reported Blinding: double blinded, method not reported Outcomes: 1 year overall survival, hospital stay, technical success Follow up: 1 year for survival data, prior to hospital discharge for other outcomes Statistical analysis: Summary statistics of the baseline characterization are given as mean values. Survival distribution curves are compared by log-rank test. The level of statistical significance was set at 0.05.	**Results** Overall survival at 60 weeks Palliative stent= 0/15 Colostomy= 0/15 Log-rank test= not statistically significant Technical success in palliative stent group= 14/15	**Limitations** Cochrane risk of bias tool **Selection bias** Random sequence generation: unclear risk (not reported) Allocation concealment: unclear risk (stated that it was double blinded, but did not report method) **Performance bias** Blinding of participants and personnel: low risk (method for double blinding not reported, but lack of blinding unlikely to affect assessment of objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (method for double blinding not reported, but lack of blinding unlikely to affect assessment of objective outcomes) **Attrition bias**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Ref Id 954936 **Country/ies where the study was carried out** Greece **Study type** RCT **Aim of the study** The aim of the study was to compare self-expanding metallic stents (SEMS) with stoma creation for inoperable malignant colonic obstructions. **Study dates** March 1998 to April 2002 **Source of funding** Not reported	Sigmoid colon= 12 Confirmed multiple metastases in the liver, lungs, bones or brain= 19 Unable to undergo surgery due to serious hemodynamic or pulmonary instability= 11 **Inclusion criteria** Patients with partial inoperable malignant colonic obstruction **Exclusion criteria** Not reported	guidewire in place, the endoscope was reinserted beside it to the distal margin of the lesion. The lesion's length was defined endoscopically, and the upper and lower margins were marked under fluoroscopic guidance with external radiopaque markers. Through the working channel of the colonoscope and over the guidewire, a compressed uncovered metallic endoprosthesis delivery system (length, 8 cm; diameter, 20–22 mm) (Wallstent; Microvasive, Boston Scientific, Galway, Ireland) was introduced and passed beyond the lesion. Under fluoroscopic and endoscopic control, the stent was then deployed with the patient in the supine position. Colostomy= "A nonfunctional stoma was created through a midline incision with the patient under general anesthesia. In all cases, we created an end-sigimoid colostomy proximal to the stenosis and a mucous-technique fistula of the distal colon."			Incomplete outcome data: unclear risk (method for managing attrition not reported) **Reporting bias** Selective reporting: high risk (outcomes of interest not stated in Methods) **Other bias** 6/30 (20%) patients had primary ovarian cancer, study did not provide details on which groups these patients were in or do subgroup analyses **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Full citation Young, C. J., De-Loyde, K. J., Young, J. M., Solomon, M. J., Chew, E. H., Byrne, C. M., Salkeld, G., Faragher, I. G., Improving Quality of Life for People with Incurable Large-Bowel Obstruction: Randomized Control Trial of Colonic Stent Insertion, Diseases of the Colon & RectumDis Colon Rectum, 58, 838-49, 2015 **Ref Id** 860416 **Country/ies where the study was carried out** Australia **Study type** Multi-centre RCT **Aim of the study** The aim of the study was to compare stent insertion with	**Sample size** n= 52 n stent = 26 n surgery= 26 **Characteristics** Stent, n=26 Age, years, mean (SD), range=66 (11), 41-83 Male sex, n=17 Pathology, n Primary colorectal cancer=19 Recurrent colorectal cancer=1 Primary noncolorectal cancer=3 Recurrent noncolorectal cancer=3 ASA grade, n I/II=17 III=7 Site of obstruction, n Rectum=5 Rectosigmoid=9 Sigmoid=8 Descending colon=2 Splenic flexure=1 Transverse colon=0 Hepatic flexure=1 Ascending colon=0	**Interventions** Stent= "received a self-expanding metallic stent placed through the obstructing lesion by the use of a combined endoscopic and fluoroscopic approach. All stents inserted were uncovered stents. Patients who were not successfully stented underwent surgical intervention deemed appropriate by the operating surgeon. Data for these patients were analyzed in the stent group according to intention-to-treat principles." Surgery= "had surgery to decompress their obstruction by a technique determined appropriate by the operating surgeon and the pathology encountered. Although it was expected that the vast majority of patients undergoing surgery would require a stoma, a stoma was not enforced as the only option. This was to ensure that the control group reflected what the surgery would truly be, whether with stoma, resection, or anastomosis, when stent	**Details** Randomisation: computer-generated permuted block randomization schedule, completed by the study coordinator Allocation: "It was not possible to blind surgeons and patients to the procedure; however, all subjective outcome assessments were performed by a blinded investigator." Outcomes: Primary outcome: Quality of life (differences between groups in EQ-5D index change scores). Secondary outcomes: overall survival (survival at 12 months postprocedure), 30-day mortality (death from any cause up to 30 days after the procedure), rates of permanent stoma formation, procedure time, anesthetic time, postprocedure stay, days spent in the intensive care unit and high dependency unit, time to first flatus and first bowel movement, time to start of a normal diet, early postprocedure complication rate, 12-month complication rate, length of stay, disease-related readmission, and differences in QLQ CR-29 scales. Follow up: 12-months Statistical analysis: All data were analyzed on an intention-to-treat basis. The level of significance for all tests was $p < 0.05$. Continuous data were analyzed by using an independent T test or nonparametric tests where appropriate. EQ-5D index change scores and QLQ CR29 data were compared between treatment groups. Categorical data were analyzed using the $\chi 2$ and Fisher exact tests (FET). Mean and medians are reported alongside the SD, interquartile range, or 95% CIs, where appropriate. Kaplan-Meier analysis was used to describe time-to-event data. Overall survival was measured from the date of surgery or stent procedure to the	**Results** 1-year overall survival, event is death from any cause Stent= 17/26 Surgery= 19/26 Log-rank test= 0.61 Technical success in stent group= 19/26 Clinical success in successfully stented group= 19/19 30-day mortality, n Stent= 2/26 Surgery= 4/26 Postprocedure stay, days, median (95% CI)* Stent= 7 (3-12) Surgery= 11 (8-17) p-value= 0.03 *Assessed as the number of days spent in the hospital for the procedure Anastomotic leak, n Stent= 0/26 Surgery= 0/26 Wound infection, n Stent= 0/26 Surgery= 1/26 Stoma, n Stent= 7/26 Surgery= 24/26 Quality of life, mean EQ-5D change score from baseline to 1 year Stent= -0.328 Surgery= -0.561	**Limitations** Cochrane risk of bias tool **Selection bias** Random sequence generation: low risk Allocation concealment: unclear risk (not reported) **Performance bias** Blinding of participants and personnel: unclear risk (method for double blinding not reported, lack of blinding could potentially affect patients' performance on subjective outcomes i.e. Quality of Life; unlikely to affect objective outcomes) **Detection bias** Blinding of outcome assessment: low risk (not possible to blind, but subjective outcomes assessed by blinded investigator; lack of blinding unlikely to affect assessment of objective outcomes) **Attrition bias** Incomplete outcome data: low risk (intention to treat analysis used) **Reporting bias** Selective reporting: low risk (primary outcome points were reported) **Other bias** **Other information**

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
surgical decompression for quality of life and survival. **Study dates** September 2006 to November 2011 **Source of funding** No funding received	Metastasis, n Liver=19 Lung=7 Peritoneal=8 Retroperitoneal=1 Bone=0 Brain=1 Surgery, n=26 Age, years, mean (SD), range=67 (14), 35-86 Male sex, n=18 Pathology, n Primary colorectal cancer=20 Recurrent colorectal cancer=0 Primary noncolorectal cancer=2 Recurrent noncolorectal cancer=4 ASA grade, n I/II=11 III=14 Site of obstruction, n Rectum=6 Rectosigmoid=5 Sigmoid=12 Descending colon=1 Splenic flexure=1 Transverse colon=0 Hepatic flexure=0 Ascending colon=1 Metastasis, n Liver=21	insertion was not an option."	date of last follow-up, or the date of death. The log-rank test was used to determine statistical significance between survival curves. Median survival and 6- and 12-month survival are reported alongside a SE.		

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
	Lung=8 Peritoneal=11 Retroperitoneal=1 Bone=1 Brain=0 **Inclusion criteria** "Patients ≥18 years who presented between September 2006 and November 2011 with a malignant LBO, deemed not curable by surgical intervention (assessed in a multidisciplinary team meeting where possible because of the emergency nature of cases)" **Exclusion criteria** "ASA grade IV or V, required urgent laparotomy because of perforation or ischemia of the bowel, had evidence of synchronous and				

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
	separate sites of small and LBO, or were cognitively impaired or unable to give informed consent."				

ASA: American Society of Anesthesiologists; CT: computed tomography; DFS: disease free survival; DSS: disease specific survival; ES: emergency surgery; ESER: emergency stenting followed by elective resection; EORTC QLQ-C30: European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 Items; EORTC QLQ-CR29: European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire colorectal cancer module (29 items); EORTC QLQ-CR38: European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire colorectal cancer module (38 items); EQ-VAS: EuroQol visual analogue scale; EQ-5D: HIV: human immunodeficiency virus; ITT: intention to treat; IQR: interquartile range; LBO: large bowel obstruction; OS: overall survival; PFS: progression free survival; SBTS: stenting as a bridge to surgery; SD: standard deviation: SEMS: self-expanding metallic stent; TACIR: total abdominal colectomy and ileorectal anastomosis