Approaches to the Diagnosis and Management of Massive Lower Gastrointestinal Bleeding

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National Healthcare Group
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CALS

References

- KK Tan, D Wong, R Sim. Superselective embolisation for lower gastrointestinal haemorrhage: an institutional review over 7 years. World J Surg. 2008; 32(12):2707-15.
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Lower Gastrointestinal Bleeding (LGIB)

- Minor – self-limiting
- Massive – life-threatening
- Occult
- ‘Malaena’
- ‘Pseudo’

LGIB - Introduction

- Distal to the Ligament of Treitz - small bowel, colon, and rectum
- 20–33% of all GI hemorrhage
- 25% of bleeding is massive or recurrent
- 10-15% require imaging localization and directed therapy
- Mortality 3-5%, increases to 30% when > 4 units packed RBCs required in 24h

Assessment and Resuscitation

- Focused clinical history - Previous GI bleed/surgery/polypectomy/radiation, CV risks, NSAID/antiplatelet/anticoagulant
- Physical exam – BP/pulse, peritoneal signs, chronic liver stigmata, AAA, digital rectal exam and anoscopy, nasogastric tube
- Resuscitation – fluids, blood and blood products

Diagnostic Tests

- Endoscopy – Colonoscopy +/- Gastroscopy
- Scintigraphy – Tc-99m RBC/sulphur colloid
- MDCT angiography
- Catheter directed mesenteric angiography
- Video capsule endoscopy
- Small bowel enteroscopy
- CT Enterography
- MR Enterography

Diagnostic Sensitivity

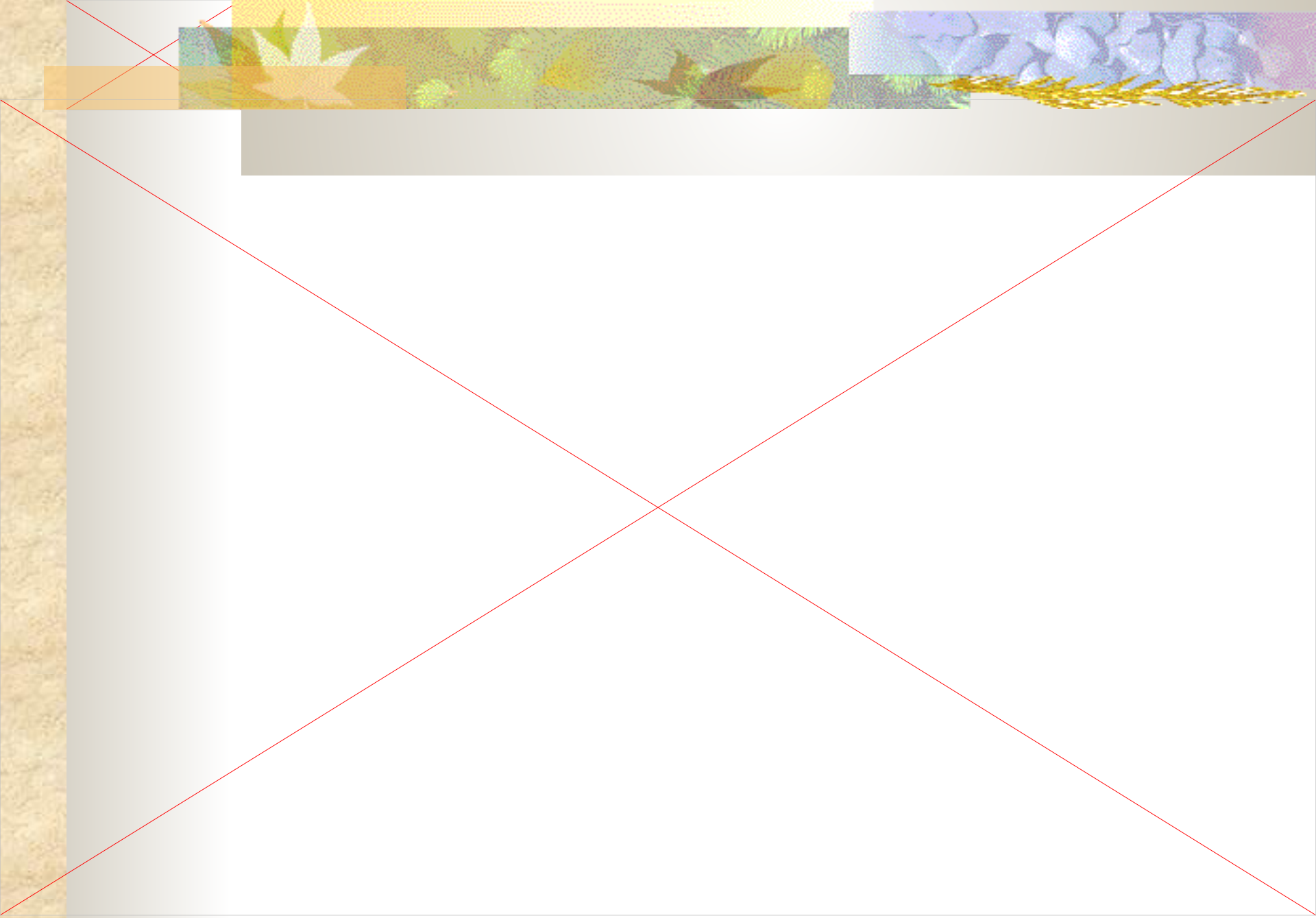
- Tc-99m RBC scan - 0.1ml/min
- CT angiography - 0.35ml/min
- Mesenteric angiography - 0.5ml/min
- Colonoscopy - 1ml/min

Fig. 1 CT angiography showing extravasation of contrast into sigmoid diverticula.

Active GI bleed is typically identified as a focal area of high attenuation within the bowel lumen, representing a collection of contrast material that has been extravasated in association with arterial bleeding. Active arterial extravasation can be differentiated from clotted blood by measuring CT attenuation.

Colonoscopy

- Initial procedure for evaluation if stable or when stabilized
- Appropriate when bleeding has stopped and bowel preparation is possible
- Useful adjuncts – CO2 insufflator, endoscopic flushing pump
- Identify cause/stigmata of recent bleed, localise level or detect lesions that may or may not be related to the bleed
- Therapeutic potential – injection, thermal coagulation, clips, bands, loops



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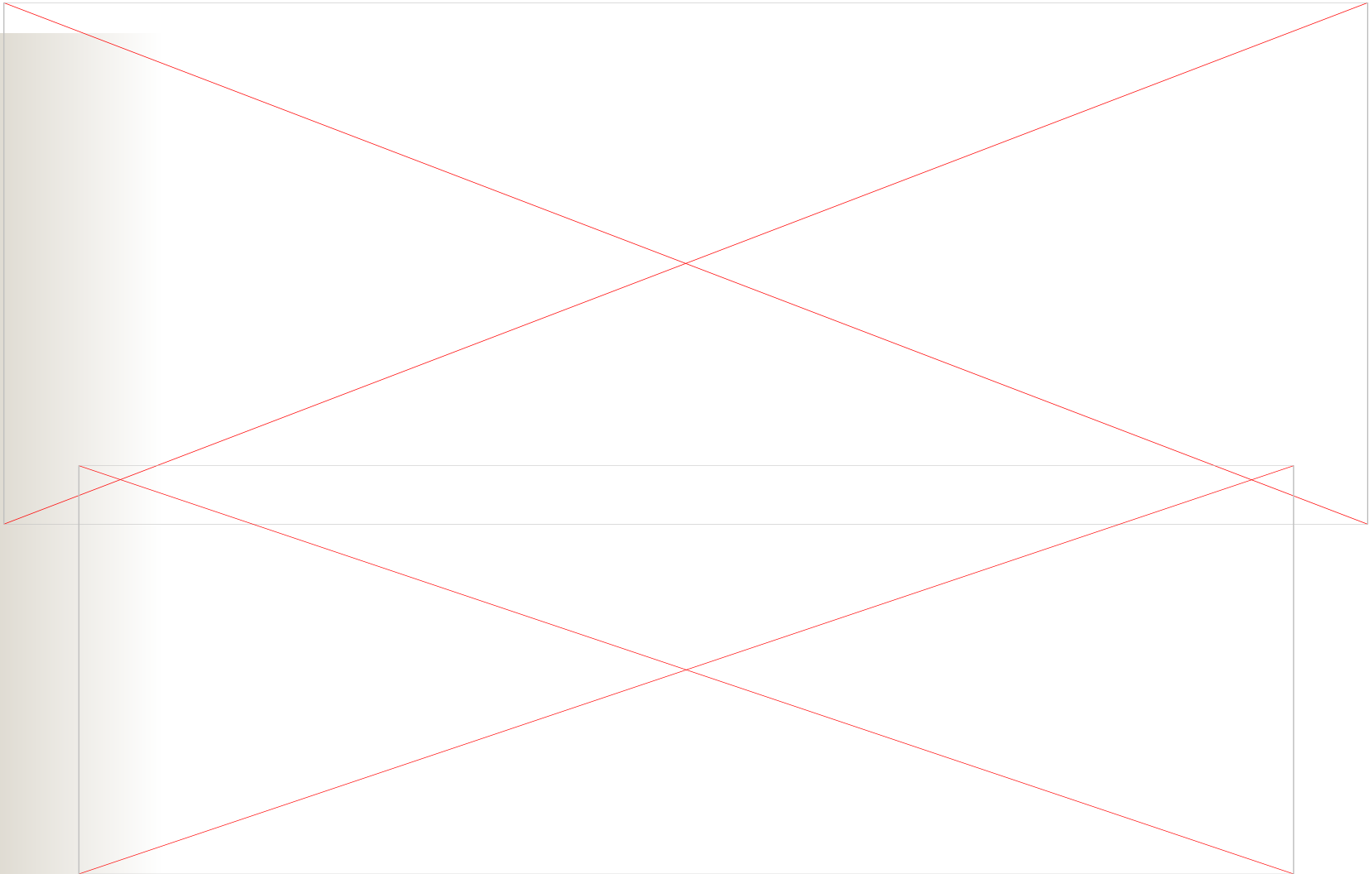
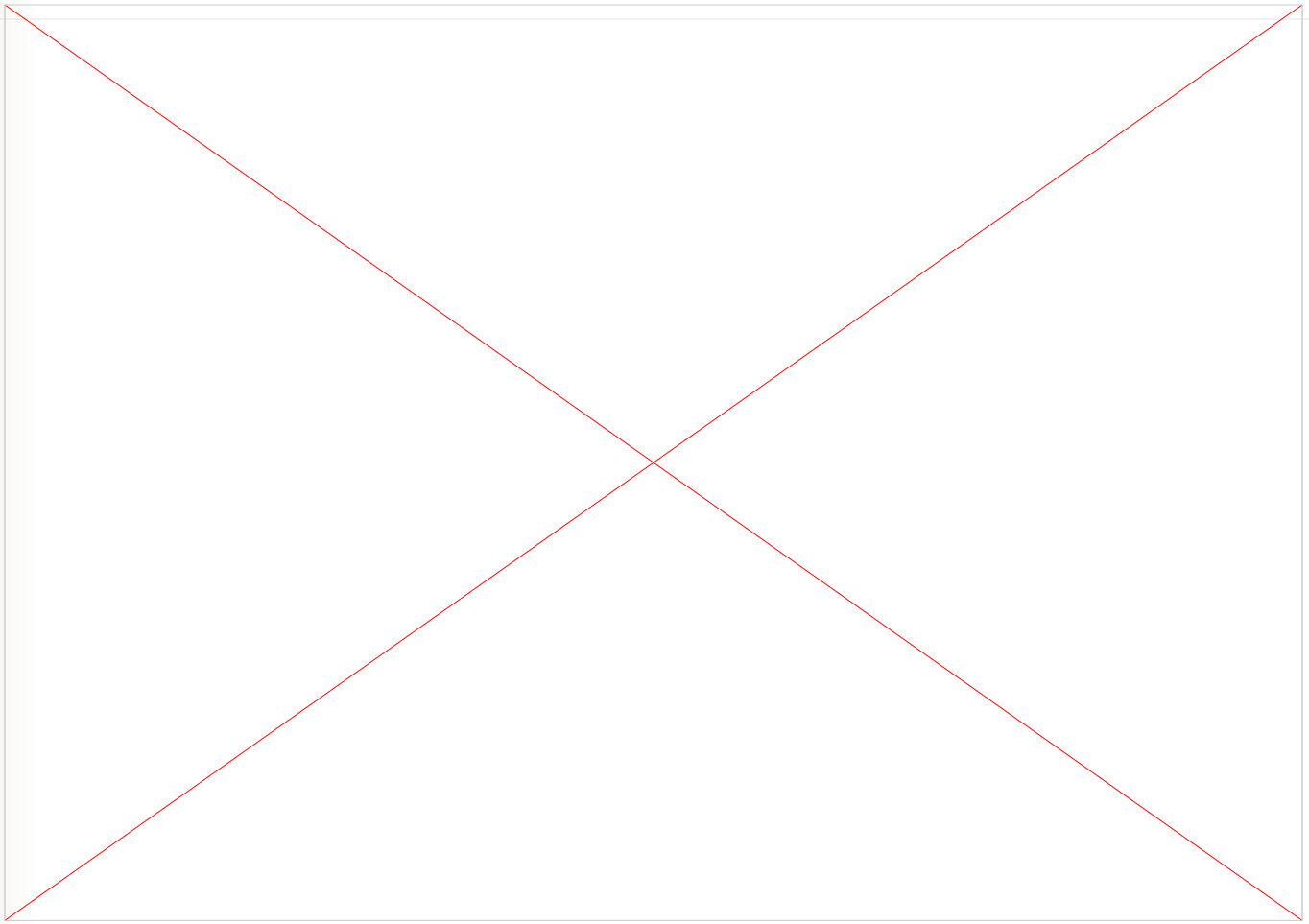
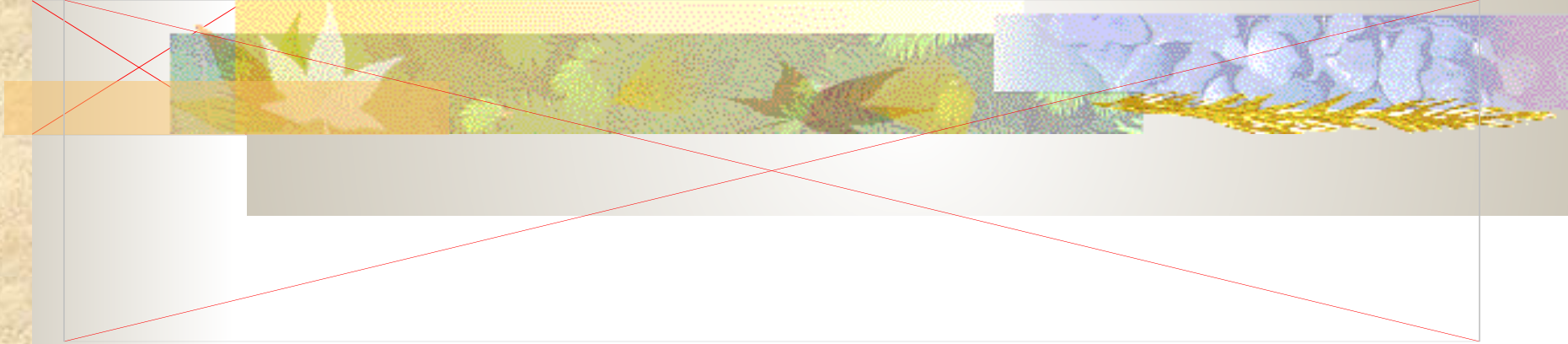
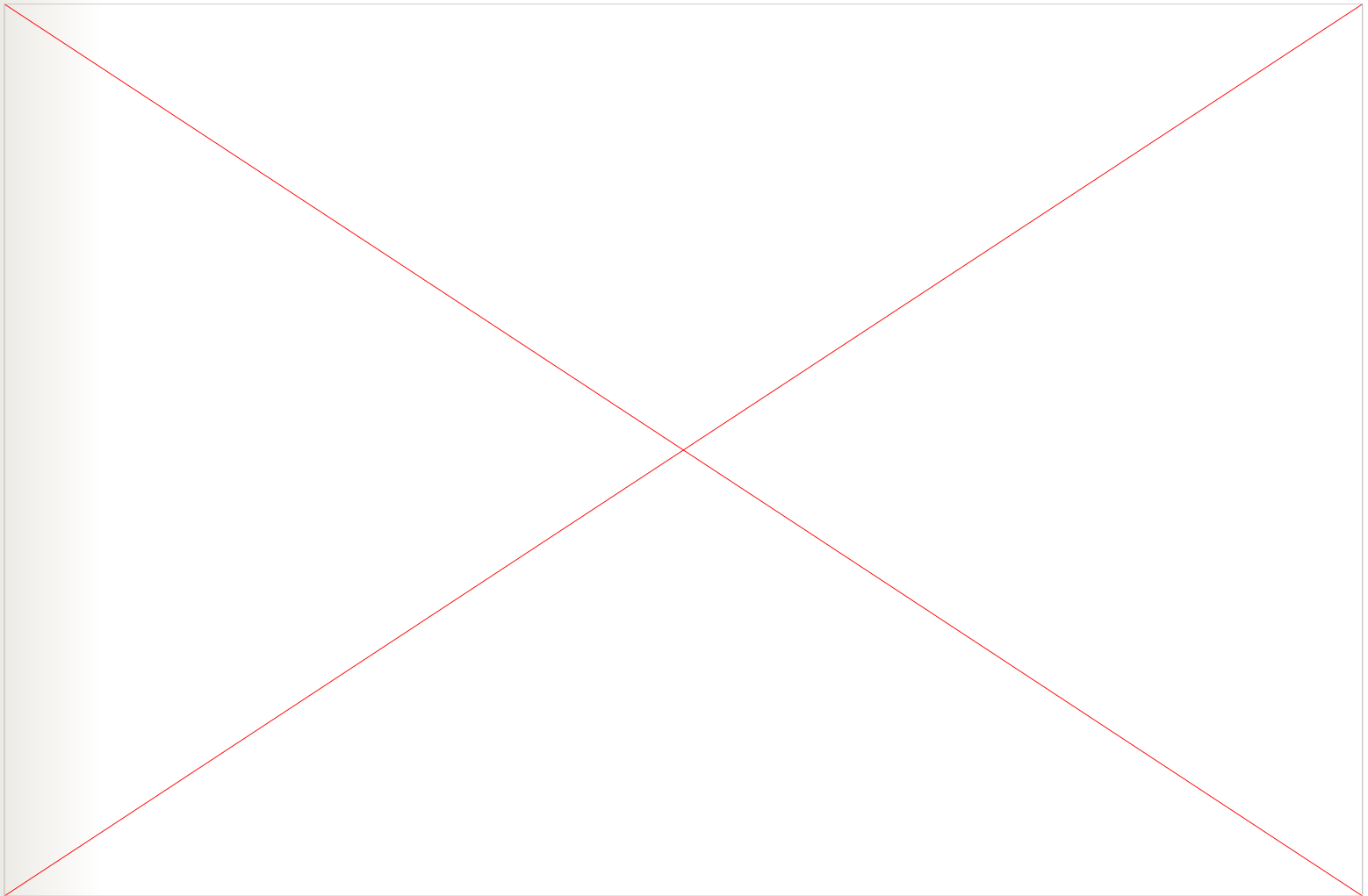
Enodoscopic band ligation (EBL) is superior to endoscopic clipping for the treatment of colonic diverticular hemorrhage

Takeshi Setoyama · Naoki Ishii · Yoshiyuki Fujita









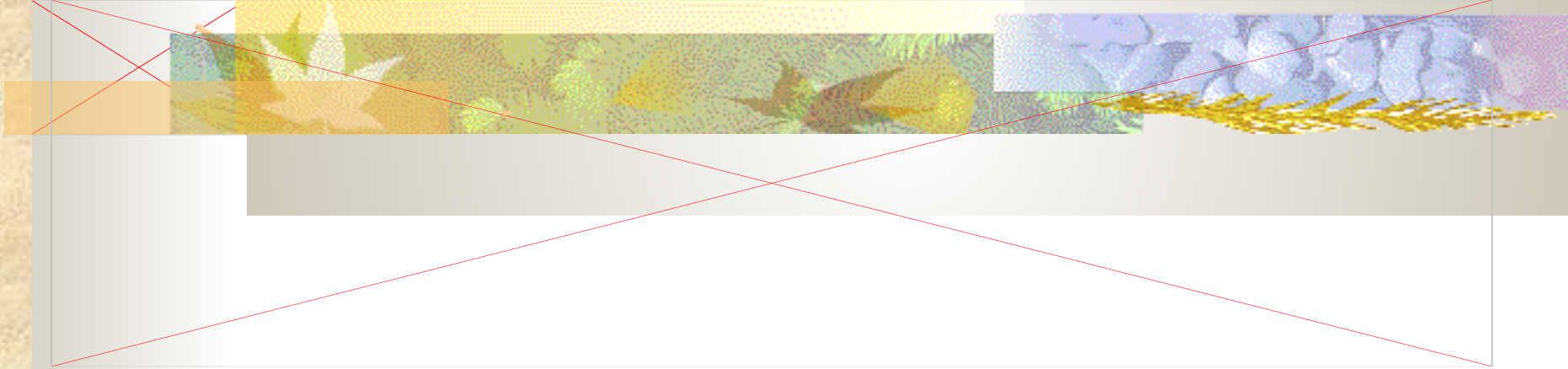
Rebleeding

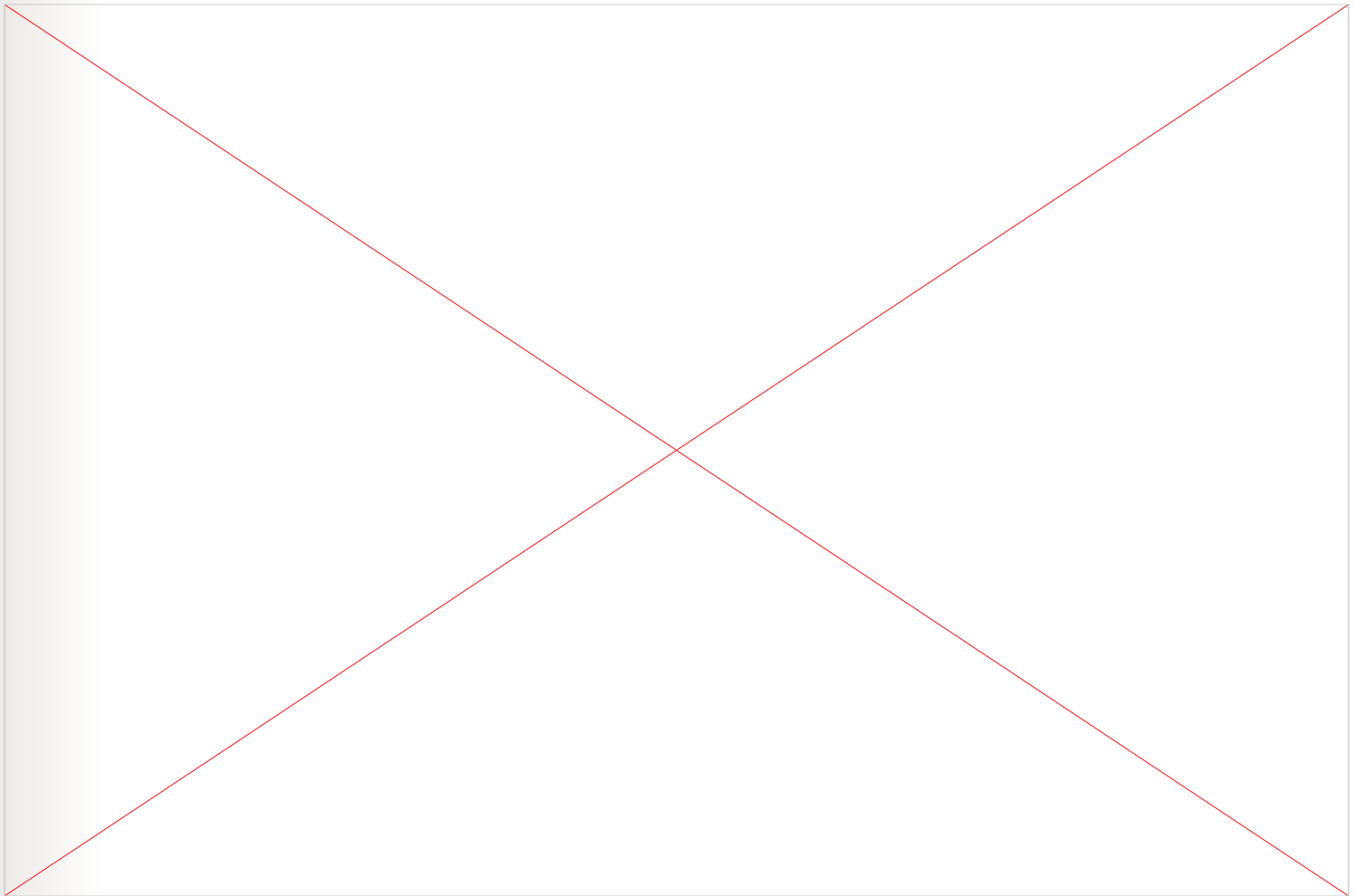
- More likely if bleeding was in the small bowel compared to the colon (OR: 8.33, 95% CI 1.03–66.67).
- More likely in patients with a Hct<20 (OR: 7.52, 95% CI: 1.14–50.00) and Platelets <140 000 (OR: 9.35, 95% CI: 1.36–62.5)

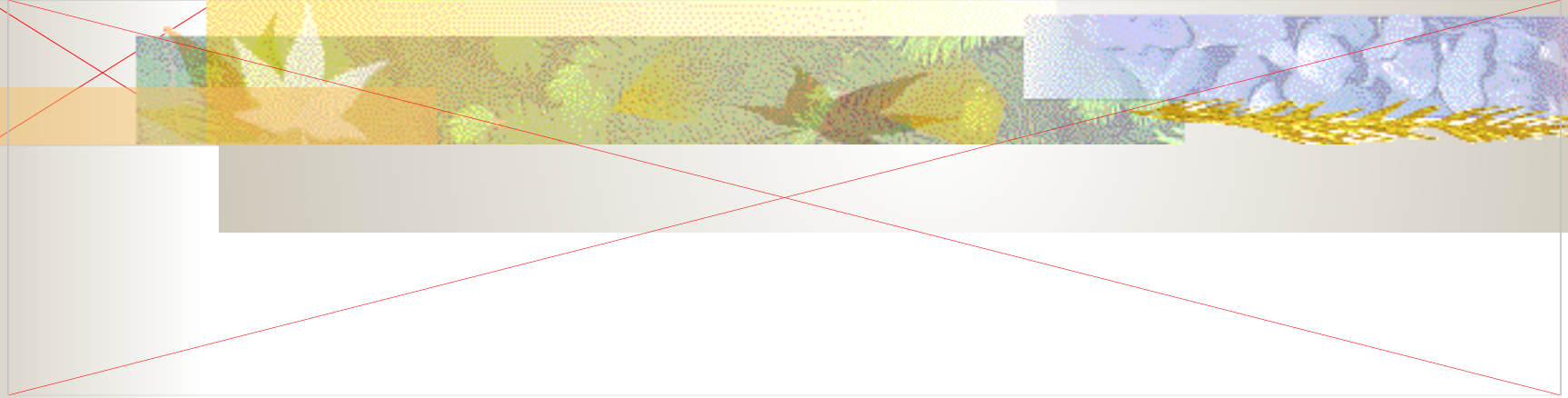
Need for Surgery

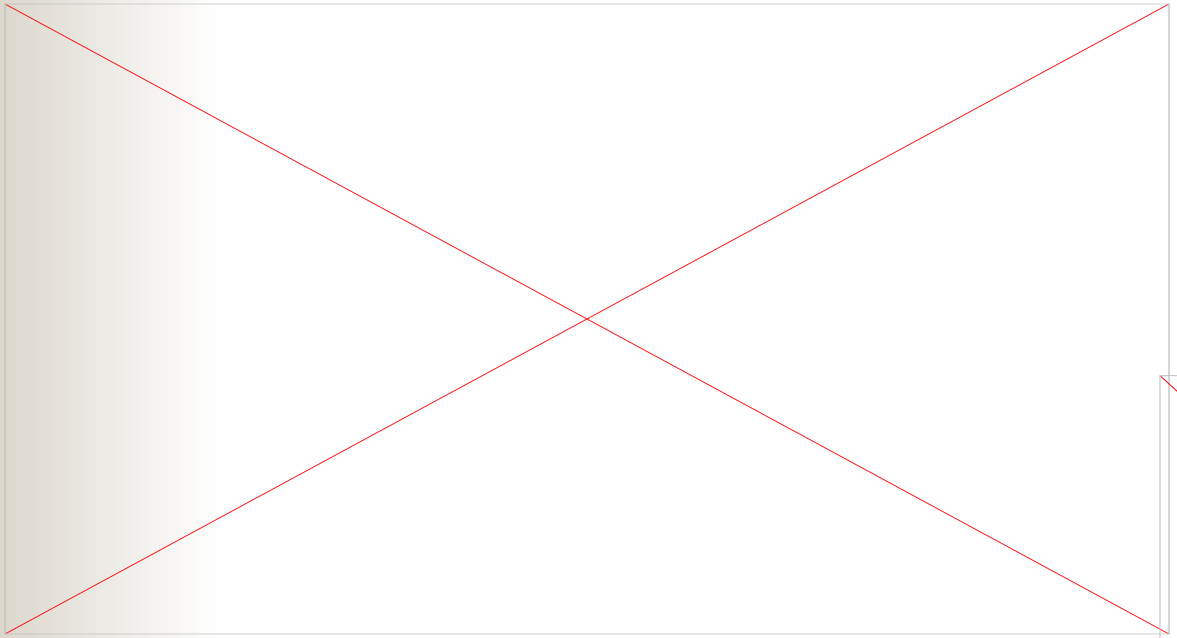
- More likely in patients with Hct<20 just before embolization (OR: 12.66, 95% CI: 1.96–83.33)
- More likely if the underlying cause was diverticular disease (OR 8.70, 95% CI: 0.93–83.33)

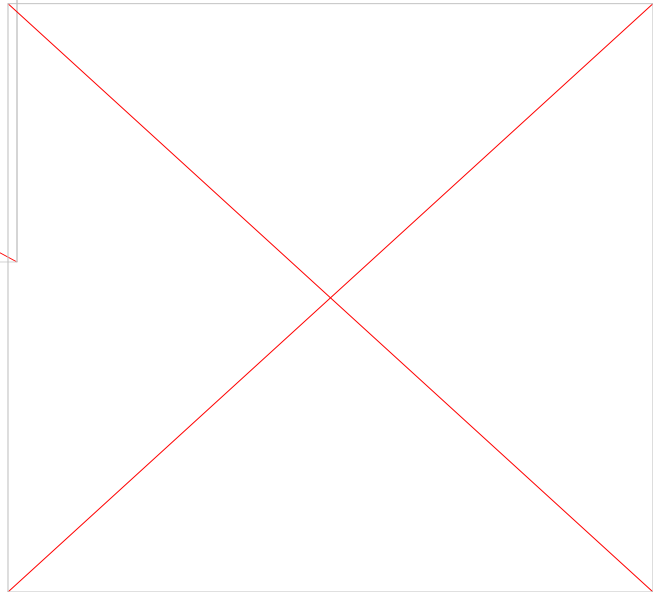
- Highly successful and relatively safe—97% technical success and 3% postembolization ischemia.
- In 63% of cases it is definitive without any further intervention.
- Postembolization ischemia and surgery may be associated with a higher risk of anastomotic leak.
- Greater vigilance with active hemorrhage from the small bowel and in those with Hct <20.







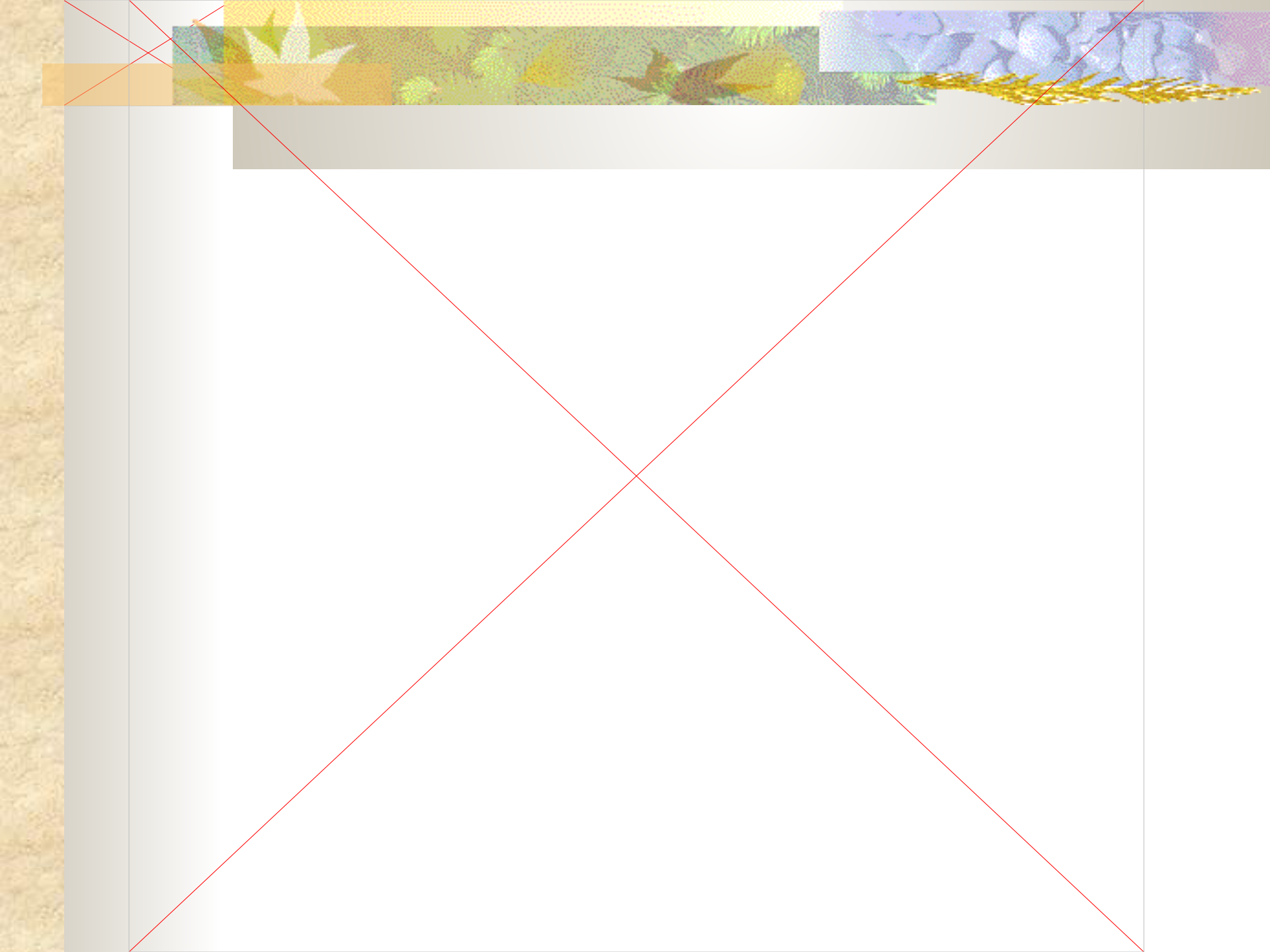




- 21.7% rebled within the same admission
- Mortality 4.3%, No ischemic complication
- Median follow-up 40 months (5–99 months)
- Of the 69.6% for whom the procedure was definitive initially, 25.0% rebled within 2 years

Conclusions

- Superselective embolization for active colonic diverticular hemorrhage is safe and effective and should be considered as a first line treatment if available.
- The procedure could act as a bridge to a subsequent more definitive elective surgery or be definitive as seen in over 50% of our patients over a period of 40 months.



Long-Term Outcome of Transcatheter Embolotherapy for Acute Lower Gastrointestinal Hemorrhage

Geert Maleux, MD, PhD[1], Filip Roeflaer, MD[1], Sam Heye, MD[1], Jo Vandersmissen, MD[1], Anne-Sophie Vliegen, MD[1], Ingrid Demedts, MD, PhD[2] and Alexander Wilmer, MD, PhD[3]

OBJECTIVES: **We sought to assess the safety, short- and long-term efficacy, and durability of transcatheter embolization for lower gastrointestinal hemorrhage (LGH) unresponsive to endoscopic therapy and to analyze the overall survival of the embolized patients.**

METHODS: **Between January 1997 and January 2008, 122 patients were referred for angiographic evaluation to control major LGH. Overall, 43 patients (35.3%) presented with angiographic signs of contrast extravasation. In 39 patients (26 men, 13 women; mean age 67.7 years), a transcatheter embolization was performed to stop the bleeding.**

RESULTS: **In all 39 patients, no contrast extravasation could be depicted on completion of angiography after embolization. Rebleeding occurred in eight patients (20%), in six of them within the first 30 days after embolization. Ischemic intestinal complications requiring surgery occurred in four patients (10%) within 24 h after embolization. Long-term follow-up depicted estimated survival rates of 70.6, 56.5, and 50.8% after 1, 3, and 5 years, respectively.**

CONCLUSIONS: **Transcatheter embolotherapy to treat lower gastrointestinal bleeding is very effective, with a relatively low rebleeding and ischemic complication rate, mostly occurring within the first month after the embolization. Long-term follow-up shows a very low late rebleeding rate, and half of the embolized patients survive more than 5 years. This study shows that the majority of patients presenting with lower gastrointestinal bleeding, unresponsive to endoscopic therapy, do not benefit from transcatheter embolization. In cases of angiography extravasation, a good immediate clinical outcome—defined as high immediate success with acceptable rebleeding—and ischemic complication rate may be obtained.**

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Successful management of a difficult case of radiation proctopathy with Ankaferd BloodStopper: a novel indication

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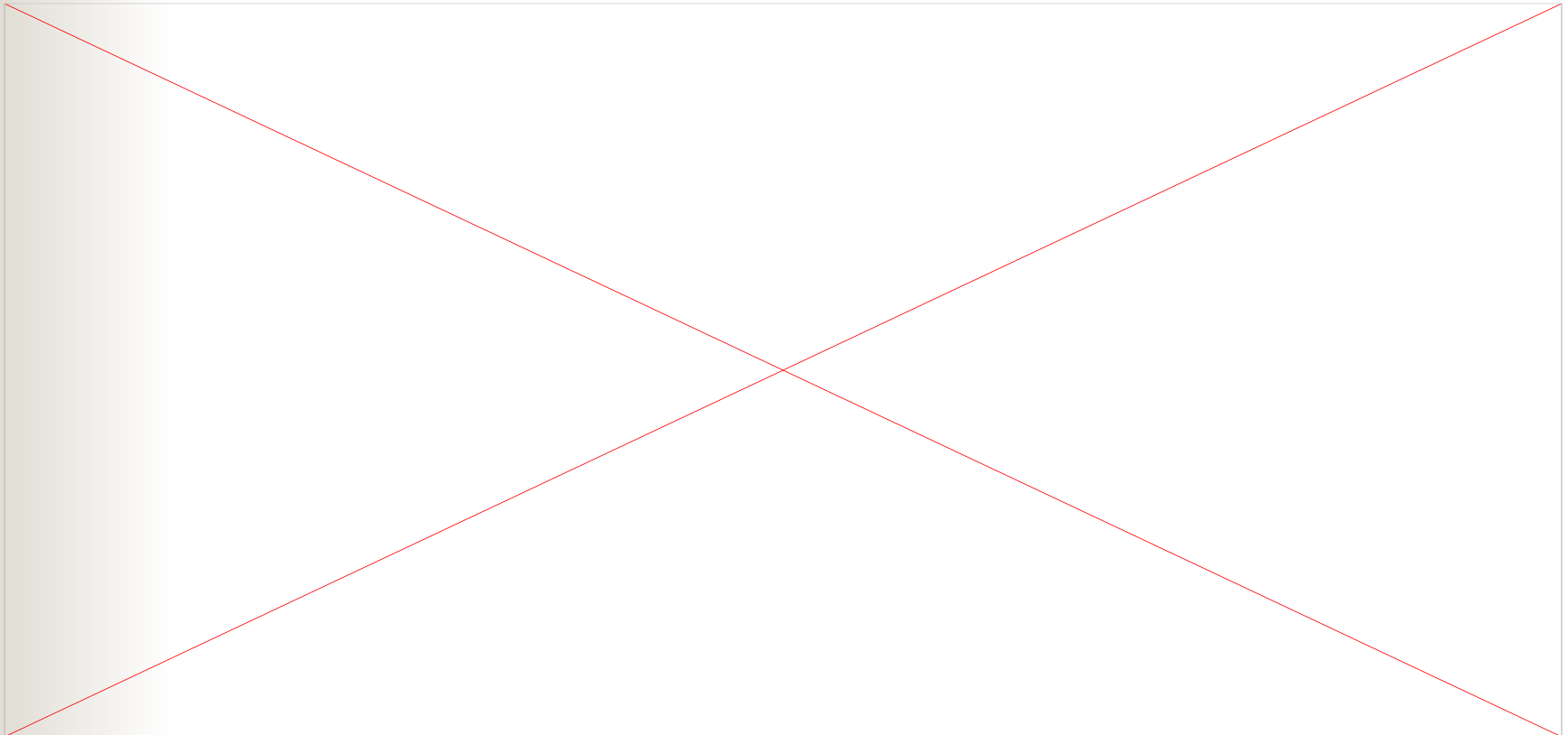
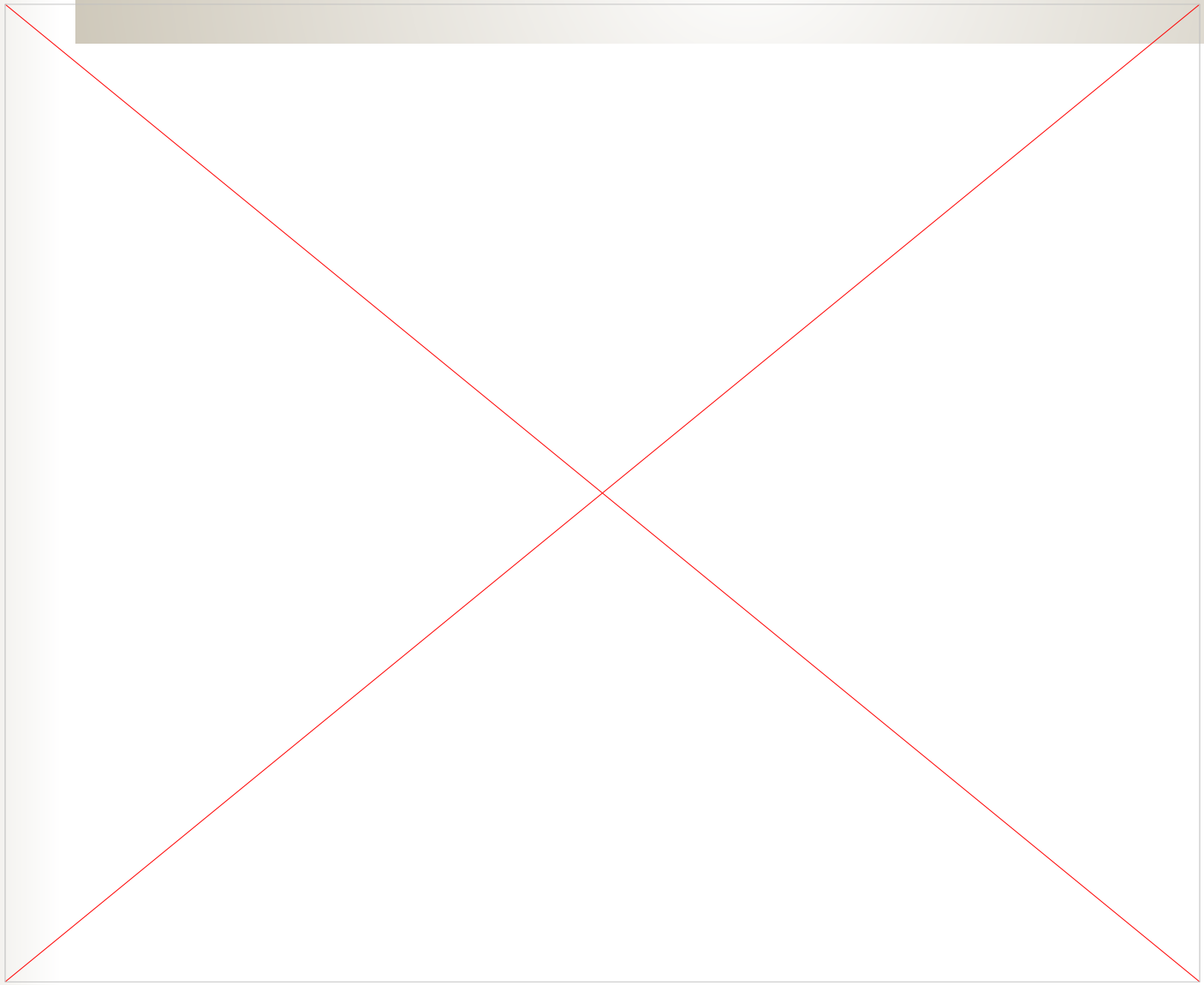
Ankara, Turkey



Surgery

- Indications - continued or recurrent hemorrhage despite nonoperative attempts, ongoing hemodynamic instability, transfusion >6 units/24h or >10 units/episode.
- Bleeding localized - Segmental resections are the treatment of choice, with re-bleeding 0-15% and mortality less than 10%.

  Extent of resection for pan-colonic diverticulosis?
- Non-Localized Bleeding - Emergency colectomies have a mortality of 10-30%, and if a segmental colectomy is performed, the risk of re-bleeding is 35-75% with a mortality of 20-50%. If the bleeding appears to be originating from the colon, the procedure of choice is a total abdominal colectomy, which has a re-bleeding rate of less than 2% and mortality of 10-15%.
- On-table colonoscopy and enteroscopy
- Other considerations - stoma or anastomosis, pre-exisitng bowel disease and function, laparoscopy



Summary

- Resuscitate and CT angiogram KIV angioembolisation if unstable
- Resuscitate and prep for expeditious colonoscopy when stable
- Localise bleeding preoperatively as far as possible with as many tests as required
- Total abdominal colectomy if surgery indicated and bleeding not localised

Repeat endoscopy with every bleed
Colour and amount of blood is inaccurate

Findings Description

Stale malaena in TI
5mm vascular looking polyp at TI/ICV- hot bx, clip x1
Brown stool in colon
Decision for OGD - pat. agreeable

Findings Description

sigmoid polyp- hot snared
caecal divert

Detailed documentation
Keep it simple

Time will tell

Time will tell