

Game Changers

THE ERA OF MANAGEMENT OF COLORECTAL LIVER METASTASES

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Colorectal malignancy represents the second most common cause of cancer related mortality in the UK. The majority of mortality relates to metastatic disease, most commonly colorectal liver metastases (CRLM)¹.

For several decades it has been recognised that CRLM do not necessarily equate incurable disease. Previous resection criteria required low burden disease limited to one lobe. This is no longer the case; the gloves are off when it comes to liver metastases.

There are two simple criteria for CRLM resection. Resection must be technically feasible with adequate margins and sufficient remnant liver (minimum 30% volume) and the patient must be fit enough to undergo liver resection. Even where there is unlikely to be sufficient remnant volume this does not preclude the possibility for resection. Techniques including chemotherapy to reduce tumour burden, ablation for small lesions and portal vein embolization to produce future liver remnant hypertrophy are used to render more advanced disease operable. Even CRLM with low burden lung metastases can be resected in combination with lung resection, with good reported outcomes². Where curative treatment is not possible selective internal radiation therapy (SIRT) can offer excellent palliation.

5 year survival rates following CRLM resection are reported as high as 48%³. When disease recurs the criteria for further resection remain the same, with excellent outcomes reported from repeated resection. Ultimately we are entering a new era in the management of CRLM; no longer should development of CRLM be considered a terminal event as we attempt to cure or convert this into a chronic condition.

1. Cancer Research UK, <https://www.cancerresearchuk.org/health-professional/cancer-statistics/mortality/common-cancers-compared#heading-Zero>, Accessed June 201
2. Lam, V.W.T., Pang, T., Laurence, J.M. et al., A Systematic Review of Repeat Hepatectomy for Recurrent Colorectal Liver Metastases, *J Gastrointest Surg* (2013) 17: 1312. <https://doi.org/10.1007/s11605-013-2186-5>
3. Engstrand J, Nilsson H, Strömberg C, Jonas E, Freedman J. Colorectal cancer liver metastases - a population-based study on incidence, management and survival. *BMC Cancer*. 2018;18(1):78. Published 2018 Jan 15. doi:10.1186/s12885-017-3925-x

EPICARDIAL ACCESS FOR VENTRICULAR TACHYCARDIA ABLATION – A BUBBLE IN THE LAGAN?

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Scar related ventricular tachycardia (SRVT) is a significant cause of morbidity and mortality in patients with structural heart disease. While implantable cardioverter-defibrillators have been shown to be effective in preventing sudden death due to ventricular arrhythmias, they are not able to prevent recurrent episodes, but rather treat these arrhythmia when they occur. Antiarrhythmic drugs have demonstrated some efficacy in preventing VT. SRVT ablation is often the only treatment option in patients in whom medications are not tolerated or are ineffective.

SRVT can originate from the surface of the heart (endo or epicardial) or be midmyocardial. Endocardial SRVT can be approached for ablation via the transvenous or intra arterial route, however epicardial access is more difficult. Traditional epicardial access is obtained percutaneously using a subxiphoid or transpericardial puncture to obtain access for a guide wire in which to insert a steerable sheath. Due to the moving heart and small epicardial space major complication rates are high (reported at 5% in high volume centres).

The transc coronary vein exit procedure was recently described by Silberbauer et al.¹ Coronary vein exit into the pericardial space is achieved using a stiff coronary artery wire. A microcatheter is then passed over the wire into the pericardial space to facilitate CO₂ insufflation. The CO₂ creates an air gap or 'bubble' that is easily visualised under fluoroscopy. Subsequent percutaneous subxiphoid anterior access, using a microneedle puncture, is then achieved reliably and safely.

Did this 'bubble' come up the Lagan, I think not!

1. Coronary Vein Exit and Carbon Dioxide Insufflation to Facilitate Subxiphoid Epicardial Access for Ventricular Mapping and Ablation: First Experience. Silberbauer J, Gomes J, O'Nunain S, Kirubakaran S, Hildick-Smith D, McCready *JACC Clin Electrophysiol*. 2017 May;3(5):514-521

