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| **From the pilot TAP-IPC study to opening of the Australasian Malignant** **PLeural Effusion (AMPLE)-4 multicentre randomised controlled trial** |
| Matthew Ing1,2,3, Estee P M Lau1,4, Sona Vekaria2, Edward TH Fysh3,5,6, Ranjan Shresthra7, Elaine LC Yap8, Nicola A Smith9, Benjamin CH Kwan10, Tajalli Saghaie11, Bapti Roy4,12, John Goddard13, Sanjeevan Muruganandan14, Arash Badiei15, Phan Nguyen15, Mohamed Faisal Hamid16, Vineeth George17 , Archit Chawla18, Conceicao Santos19, Kevin Murray3, Aron Chakera2,3, Ai Ling Tan1,2 and Y C Gary Lee1,2,3 |
| 1Institute for Respiratory Health, 2Sir Charles Gairdner Hospital, 3University of Western Australia, 4Edith Cowan University, 5St John of God Health Care, 6Curtin University & 7Fiona Stanley Hospital, Perth, WA. 8Middlemore Hospital, Auckland & 9Wellington Hospital, NZ. 10St Vincent’s Hospital & University of New South Wales, Sydney, NSW, 11Concord Repatriation Hospital & Macquarie University, Sydney, NSW, 12Westmead Hospital, Sydney, NSW. 13Sunshine Coast University Hospital & Griffith University, Brisbane, QLD. 14Northern Health, Epping, VIC. 15Royal Adelaide Hospital & University of Adelaide, Adelaide, SA. 16Universiti Kebangsaan Malaysia Med Ctr, Kuala Lumpur, Malaysia. 17 John Hunter Hospital & University of Newcastle, NSW 18 Nepean Hospital & University of Sydney, NSW 19 Camden and Campbelltown Hospital, Sydney, NSW.  |
| **Introduction:** Indwelling pleural Catheter (IPC) is an established, guideline-endorsed treatment option for malignant pleural effusions (MPEs) but IPC-related infections remain a major concern. No strategies exist for long term prevention of IPC-related infection. In peritoneal dialysis (PD), topical mupirocin prophylaxis has been shown to reduce PD peritonitis. Our pilot TAP-IPC (Topical Antibiotics Prophylaxis for infections of Indwelling Pleural/Peritoneal Catheters) study demonstrated tolerability of regular topical mupirocin application, feasibility of recruitment and excellent treatment adherence in patients fitted with (n=50) indwelling pleural/peritoneal catheters (*Respirology*, in press). Feedback from TAP-IPC guided protocol design for the AMPLE-4 trial. **Aim:** To assess the efficacy of regular prophylactic topical mupirocin application compared with standard care (no antibiotics) in reducing IPC-related infections in MPE patients. **Method:** Pragmatic, unblinded, multi-centre randomised trial. 418 MPE patients treated with an IPC will be randomized 1:1 with minimisation for cancer type, ECOG, trapped lung and immunosuppression (chemotherapy). The study aims to include most MPE patients with few exclusion criteria (<18 years old, cannot comply/consent, mupirocin allergy or prior pleural infection). Intervention: topical mupirocin (2%) around IPC site with every catheter dressing change (minimum 2x/week). Primary outcome: rate of IPC-related (pleural, tract or skin) infections from IPC insertion until death, or 6-month follow-up. Secondary outcomes: time to infection, symptom scores, hospitalization days, complications and survival. Interim analysis: 100 patients completed study. ACTRN12623000253606.**Trial Update:** The study began recruitment in August 2023 at SCGH and Midlands Hospital. Ten patients have been recruited. 13 further centres in NSW, VIC, SA, QLD, NZ, and Malaysia will begin enrolment pending local approval. **Conclusion:** This is the first effort for long-term prevention of IPC infections. Our pilot study established the feasibility and tolerability of prophylactic mupirocin and supports evaluation of its efficacy in a RCT through the collaborative AMPLE network. **Grant Support:** Cancer Council WA. |