

Australasian Gastro-Intestinal Trials Group (AGITG) STOPNET: A randomized study of cessation of somatostatin analogues (SSA) after peptide receptor radionuclide therapy (PRRT) in mid, hind-gut, and pancreatic neuroendocrine tumours.

Matthew E. Burge, David Wyld, David A. Pattison, Sandra Bahamad, Sarah J. Hayes, Julia A. Kuszewski, Lorraine A. Chantrill, Timothy Jay Price, Hui-Li Wong, David Chan, Piyush Grover, Michael Michael, Derrick Siu, Christine Bishop, Daniel Barker, Rachel Anne Goodwin, Christopher J. O'Callaghan, Jonathan M. Loree, W. John Mak; Royal Brisbane and Women's Hospital, Herston, QLD, Australia; University of Queensland, Brisbane, QLD, Australia; Royal Brisbane and Women's Hospital, Brisbane, Australia; Australasian Gastro-Intestinal Trials Group (AGITG), Sydney, NSW, Australia; Illawarra Shoalhaven Local Health District, Wollongong, NSW, Australia; Queen Elizabeth Hospital, University of Adelaide, Woodville, SA, Australia; Peter MacCallum Cancer Centre and Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia; Royal North Shore Hospital, Sydney, NSW, Australia; Fiona Stanley Hospital, Perth, Western Australia, Australia; Peter MacCallum Cancer Centre, University of Melbourne, Melbourne, VIC, Australia; Hunter Medical Research Institute, Newcastle, NSW, Australia; The Ottawa Hospital Cancer Centre, Ottawa, ON, Canada; Canadian Cancer Trials Group, Queen's University, Kingston, ON, Canada; BCCA - Vancouver Cancer Centre, University of British Columbia, Vancouver, BC, Canada

Background: PRRT is a standard therapeutic option for patients with metastatic well-differentiated somatostatin receptor-positive gastroenteropancreatic neuroendocrine tumours (GEP-NETs) following progression on SSA. It is uncertain whether current practice of continuing SSA after commencing PRRT is beneficial, especially in non-functioning NETs. Studies by Yordanova et al. (2018) and Sygula et al. (2022) have included heterogeneous study populations and yielded conflicting results. **Methods:** STOPNET is a prospective, randomized, non-comparative, open-label, multi-center phase II trial led by the AGITG in collaboration with the Canadian Cancer Trials Group (CCTG) under the Commonwealth Neuroendocrine Tumor research collaborative (CommNETS). The trial aims to evaluate the outcomes of SSA cessation or continuation in patients with GEP-NETs undergoing PRRT after progression on SSA. The co-primary endpoints are 20-month PFS and feasibility for a phase III trial, assessed by recruitment over a 24-month period & patient acceptance of SSA cessation. Secondary endpoints include OS, rate of SSA recommencement, time to subsequent therapy, quality of life, cost-effectiveness and psycho-oncological impacts of SSA cessation. Eligible participants must have advanced or unresectable WHO grade 1/2 non-functioning GEP-NETs (excluding the foregut), and disease progression after receiving ≥ 3 months of SSA at standard growth-control doses. SSA must have been primarily commenced for growth control, as opposed to functional symptoms and for mid/hindgut NET's 24-hr urine 5-hydroxyindoleacetic acid must be < 1.5 times upper limit normal at screening. Participants will be randomized 2:1 to SSA cessation or continuation. SSA cessation arm will receive their last SSA ≥ 28 days prior to first PRRT, and the SSA continuation arm will continue SSA during and after PRRT. Following PRRT, participants will be assessed every 12 weeks (minimum 20 months) until disease progression or study closure, whichever occurs first. The sample size was calculated using Fleming's single stage design, assuming uninteresting and interesting 20-month PFS rates of 60% and 77% respectively. Novel translational research will be conducted to define and validate NET tissue and circulating biomarkers, with a particular focus on analysis of microRNA. Formalin-fixed paraffin-embedded (FFPE) tumor tissue will be retrieved (if available), with the collection of bloods at 3 time-points during study. The trial implemented the Australian Teletrial Program (ATP) to enhance equity of access for participants in regional, rural or remote locations. The trial will enroll 78 participants across 13 sites. Enrolment is open at 1 site in Australia & 4 sites in Canada, with 3 participants randomized as of Jan 2025. Clinical trial information: NCT06345079. Research Sponsor: Medical Research Future Fund (MRFF); Tour de Cure; AGITG philanthropic funding; Canadian Neuroendocrine Tumour Society (CNETS); Canadian Institutes of Health Research (CIHR).