**Approaching NETs from many angles: a medical research paradigm to challenge New Zealand’s research traditions**

**Background**

The NETwork! Research Program is an initiative from a small team that established a purpose-built infrastructure to comprehensively understand NETs with the specific aim of improving patient care. In medical research environments across the world, individual research teams traditionally carry out linear programs that serially test hypotheses and programmes evolve opportunistically. It is uncommon for a small research team to approach one disease from multiple angles, starting with a blank slate, and investing in infrastructure that takes some years before a publishable output can be expected. We describe the challenges faced, mistakes made and ideas that generated success. We hope that those embarking on projects with similar complexities can learn from our experience.

**NETwork! encompasses research in five complementary areas (Fig. 1):**
1. Register of all patients diagnosed in NZ (2008-2012) to define the incidence of NETs in an entire population;
2. National Tumour Board (or multi-disciplinary meeting – MDM) to improve patient care, identify patients who wish to donate tissue to genomic and biomarker research, and create collaborative links between clinicians;
3. Tissue collection processes, requiring co-ordination of nursing, theatre, surgical and research teams, and the process of storing the tissue (fresh frozen and if possible, archival);
4. Genomic tumour analyses designed to improve clinical management of NETs;
5. Patient input to introduce new project streams, ongoing promotion of the project, and increasing involvement from patients and their families.

Starting with an integrated clinical and scientific vision, we established NETwork! in 2012 as a NZ wide alliance between clinicians, scientists and patients. Embedded in our work is guidance from indigenous advisors to ensure our research is moulded by the cultural needs of all stakeholders.

**Figure 1. Key research areas of the NETwork! Project**

**Figure 2. Project streams, challenges and responses**

**Conclusions**

Our approach allows different strands of research to build synergistically – e.g., the registry annotates tissue blocks for genomics, the tumour board connects clinicians to translational research projects. This can be expected. We describe the challenges faced, mistakes made and ideas that generated success. We hope that those embarking on projects with similar complexities can learn from our experience.

**Kate Parker1, Cherrie Blendiron1, Cristine Print1, Michael Findlay1, Benjamin Lawrence1**

1 University of Auckland, New Zealand on behalf of the NETwork! NZ collaboration