1. **mPalliative Care Link: Examination of a digital solution to palliative care coordination among Tanzanian cancer patients**

**Global Approaches of Integrative Oncology**

**Background:** Improved end-of-life symptom control among cancer patients is a Tanzanian public health priority needing innovative solutions. Digital-health holds promise; however, palliative care specialist access is poor. Mobile Palliative Care Link (mPCL) is a smartphone application extending specialist access via shared care with local health workers (LHWs). Central to mPCL is the African Palliative care Outcome Scale (POS), adapted for automated mobile symptom assessment/reaction.

**Objective:** Field-test mPCL among user-groups (patient, specialist, LHW) recruited through an urban Tanzanian cancer hospital.

**Methods:** Untreatable adult cancer patients were randomized at hospital discharge to use mPCL versus phone-contact POS collection. Baseline sociodemographic, clinical and POS data were collected. 2x/week post-discharge, POS responses were tracked/reacted to via mPCL versus via phone-contact from study personnel among the mPCL and non-mPCL arms, respectively for up to 4 months. Symptoms and end-of-study care satisfaction were analyzed in both groups with results compared.

**Results**: 98 participants completed study (*n*=49/arm). There were more women, greater numbers of cervical cancer patients and higher use of discharge morphine in the mPCL vs. phone-contact group. Near-equal numbers of participants/arm died in the study period. POS-measured symptoms were lower in the phone-contact group (*p* = 0.0001) and symptom scores decreased over time in both groups (*p* = 0.0002); however, change in symptoms over time did not vary between groups (*p*=0.40). Care satisfaction was high in both groups with higher satisfaction in response to questions/concerns in the phone-contact group and greater spiritual support in the mPCL group.

**Conclusion:** Although intervention arm symptom scores were higher across the study period, between-group sociodemographic/clinical differences make it difficult to compare outcomes. Post-intervention care quality assessment revealed near-equal satisfaction between the two groups, supporting need for a larger randomized study of mPCL as a means to improve user-group communication with the goal of remote symptom management in under-resourced settings.