## **Project title: Cancer Research Program Program title: A study of linking cancer care and long-term care system**

## Evaluation of the Interactive Cancer Care Information Service on Linking Cancer Care to Long-term Care System: Oral Cancer as an Example

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**Background:** Many oral cancer patients suffered from treatment side effects or disease progression whether in the hospital or at home. Limited to space and time, patients and their caregivers seldom communicated with the medical team to solve their problems in time. Therefore, it is important to develop the "Interactive Cancer Care Information Services" via smart phone for meeting patients' needs, decreasing their caregivers' care burden, and improving their quality of life.

Purposes: The purpose of this study was to evaluate the effects of "Line App" applying on providing oral cancer patients and their caregivers with self-care information and health care counseling.

**Methods:** The "Interactive Cancer Care Information Service" contains three domains: (1) self-care information, (2) one-on-one online counseling, and (3) referral to other medical team. Self-care information videos were filmed by our cooperation team, including attending physicians, nurses (and an oncology case manager), a dietitian, a social worker, a speech therapist, a physical therapist, and Sunshine Social Welfare Foundation. This is an experimental and randomized design. All eligible participants were randomly assigned into experimental group (EG=27 pairs) and control group (CG=29 pairs), and each pair consist of a patient and their main caregiver. All participants required smart phone and knew how to use it. The "Interactive Cancer Care Information Service" applied on the experimental group, and the general medical care mode applied on the control group. EORTC QLQ-HN35 and Caregiver burden scale were used for descriptive and inferential statistics. All participants were evaluated twice: pre-intervention test, and three months after intervention.

**Results:** (1) Oral Cancer Patient: Overall fractional changes of symptoms, there was no difference between the two groups. Compared with the control group, the experimental group had a significant improvement in social eating (p=0.031). After the three-month intervention, the pain level decreased in the experimental group (p=0.013). However, the total score of the symptoms were no different in each group. (2) Main Caregiver: There were 58.9% of the caregivers with anxiety symptoms. After the three-month intervention, the burden scores were no different in each group.

**Conclusions and Suggestions:** By the "Interactive Cancer Care Information Service", the social eating and pain problems were improved in oral cancer patients. In the future, we will follow up the effects on the interaction of cancer care service and caregiver burden change. This "Interactive Cancer Care Information Services" would be an alternative choice for 50-65y/o oral cancer patients until the Long-term Care Policy revised.