



# PREVALENCE AND DETERMINANTS OF THE USE OF TRADITIONAL CHINESE MEDICINE (TCM) AND OTHER COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) IN NEWLY DIAGNOSED CHINESE CANCER PATIENTS IN CANADA



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## INTRODUCTION

- Through immigration, Canada is becoming more multicultural
- The Chinese population is expected to nearly double by 2017 [1]
- The healthcare system must adapt to this cultural diversity in order to deliver quality care
- Thus, an understanding of culture and its influence on healthcare is needed, especially in the oncology setting

## OBJECTIVES

1. To estimate the prevalence of TCM/CAM use in newly diagnosed Chinese cancer patients
2. To assess the impact of acculturation and other socio-demographic, medical, and cultural determinants of TCM/CAM use
3. To compare sex differences among TCM/CAM users

## METHODOLOGY

### Study Definitions

- TCM/CAM included the 10 most commonly cited therapies from previous work [2]
- "Users" were defined as having used TCM/CAM since their cancer diagnosis
- "Less acculturated" patients were defined as being immigrants, speaking a non-official language at home, and completing the Chinese version of the survey

### Inclusion Criteria

1. Self-identified family origins from China, Hong Kong, or Taiwan
2. Any tumour site(s) or treatment regimens
3. ≥18 years of age
4. Able to speak English, Mandarin, and/or Cantonese

### Procedure

- Cross-sectional study of newly diagnosed Chinese cancer patients (N=319) between March 2006 – February 2007 at two oncology centres in Canada
- Eligible patients were provided a bilingual study package upon presentation at the admission's desk for their first appointment
- The survey was a 15-item, bilingual (English/Chinese), self-administered questionnaire which was validated for content by experts in the field
- A bilingual research assistant was available to provide clarification for patients
- Questionnaires were completed prior to patients' oncology appointment and returned to labeled boxes throughout the clinic

## RESULTS

- Table 1 displays patient characteristics of TCM/CAM use
- The distribution of cancer types is shown in Figure 1

Table 1. Patient characteristics by TCM/CAM use

Variable, n (%)	All Patients N=319	Users n=147	Non-users n=172	P-value
Age (years)	59 ± 16	58 ± 15	60 ± 16	0.368
Disease Duration (months)	5 ± 16	10 ± 24	3 ± 5	0.018
Female	190 (60)	95 (66)	95 (56)	0.072
Married	239 (75)	113 (77)	126 (73)	0.458
≥High school diploma	207 (65)	98 (67)	109 (63)	0.539
>\$40,000/year	60 (19)	20 (14)	40 (23)	0.067
Prior TCM/CAM use	100 (32)	70 (49)	30 (17)	<0.001
Received conventional treatment	260 (82)	125 (85)	135 (79)	0.133
Child of immigrant	313 (98)	144 (99)	169 (98)	0.789
Lives with immediate family	309 (97)	142 (97)	167 (97)	0.929
Less acculturated	167 (52)	83 (57)	84 (49)	0.174

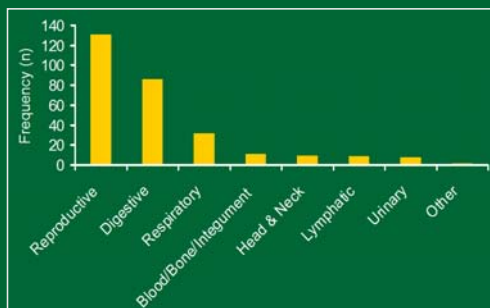


Figure 1. Distribution of cancer types among patients

- The most common cancer diagnoses were: breast (28%), colorectal (16%), prostate (8%), and lung (8%)
- Five percent of patients did not know the type of cancer they had

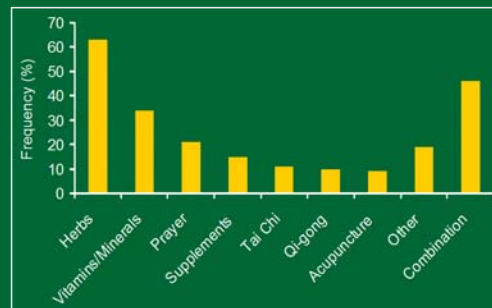


Figure 2. Distribution of TCM/CAM use by therapy type

- The distribution of use by therapy type is shown in Figure 2
- TCM/CAM was used by 47% of patients
- The most common herb used was *Ganoderma lucidum* (21%)

- A backward, stepwise logistic regression was used to identify determinants of TCM/CAM use as shown in Table 2
- No confounding or effect modification was observed in the data

Table 2. Determinants of TCM/CAM use

Variable	β coefficient	Odds Ratio	95% CI *	P-value
Less acculturated	0.52	1.68	0.99, 2.88	0.055
Received conventional treatment	0.70	2.01	1.00, 4.01	0.047
Prior TCM/CAM use	1.90	6.71	3.69, 12.19	<0.001
Cancer type **				
Digestive	-0.49	0.61	0.33, 1.15	0.129
Respiratory	0.54	1.72	0.63, 4.65	0.288
Blood/Bone/Integument	-1.43	0.24	0.05, 1.11	0.068
Head & Neck	-0.27	0.76	0.24, 2.44	0.646
Lymphatic	0.56	1.76	0.42, 7.43	0.445
Urinary	2.48	11.88	1.36, 103.94	0.025
Other	-0.06	0.94	0.08, 11.09	0.962
Unknown	-0.31	0.73	0.20, 2.74	0.645

\* CI, Confidence interval; \*\* Reference category: reproductive cancers

- Table 3 describes the sex differences among TCM/CAM users
- Female users were significantly more likely to be younger, not married, and had use of TCM/CAM prior to diagnosis

Table 3. Patient characteristics of TCM/CAM users by sex

Variable, n (%)	Males n=50	Females n=94	P-value
Age (years)	63 ± 14	56 ± 14	0.005
Disease Duration (months)	18 ± 39	5 ± 10	0.126
Married	46 (92)	66 (70)	0.002
≥High school diploma	32 (64)	65 (68)	0.591
>\$40,000/year	4 (8)	15 (16)	0.181
Prior TCM/CAM use	17 (35)	53 (58)	0.010
Received conventional treatment	43 (86)	80 (84)	0.775
Child of immigrant	50 (100)	92 (98)	0.544
Lives with immediate family	50 (100)	91 (97)	0.552
Less acculturated	29 (58)	53 (56)	0.799

## CONCLUSIONS

- TCM/CAM use is widely used among newly diagnosed Chinese cancer patients in Canada
- Users were more likely to have received conventional treatment(s), were prior users of TCM/CAM, and had urinary tract cancers
- The association between being less acculturated and the use of TCM almost reached significance; this finding may be the result of the limitations of the proxy measures used for the study
- Healthcare professionals must become aware of CAM use, especially in the oncology so as to provide culturally competent care, while maximizing therapeutic efficiency
- This study dispels the belief that CAM is used as a "last resort" in the oncology setting

## REFERENCES

1. Statistics Canada. Report #91-541-XIE, 2005.
2. Chiu L et al. J Complement Integr Med 2006;3:2



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