

## RESEARCH ARTICLE

# Survey of Willingness to Accept Chemotherapy among Elderly Malaysian Patients

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### Abstract

**Background:** The geriatric population in Malaysia is predicted to increase from 4% of the total population in 1998 to 9.8% by 2020, in parallel with developments in the socioeconomy. Cancer is expected to be a major medical issue among this population. However, the decision for treatment in Malaysia is always decided by the caregivers instead of the elderly patients themselves. **Objective:** The aim of the study was to assess the willingness to accept chemotherapy among elderly Malaysians. **Materials and Methods:** In this cross-sectional study, patients aged 60 and above from various clinics/wards were recruited. Those giving consent were interviewed using a questionnaire. **Results:** A total of 75 patients were recruited, 35 patients (47%) with a history of cancer. The median age was 73 years old. There were 29 Chinese (38.7%), 22 Indian (29.3%), 20 Malay (26.7%) and four other ethnicity patients. Some 83% and 73% of patients willing to accept strong and mild chemotherapy, respectively. Patients with cancer were more willing to accept strong and mild chemotherapy compared to the non-cancer group (88.6% vs 62.5%,  $P=0.005$ , 94% vs 80%,  $P=0.068$ ). On sub-analysis, 71.4% and 42.9% of Chinese patients without a history of cancer were not willing to receive strong and mild chemotherapy, respectively. **Conclusions:** The majority of elderly patients in UMMC were willing to receive chemotherapy if they had cancer. Experience with previous treatment had positive influence on the willingness to undergo chemotherapy.

**Keywords:** Elderly - cancer - willingness - chemotherapy - side effects

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### Introduction

Malaysia is an ageing society as a result of the rapid improvement of the socio-economic status. The proportion of people aged more than 60 years is estimated to be increased from 5.7% in 1990 to 9.8% in 2020. As the age increases, this group of population would be facing with various medical problems and cancer would be one of the major issues. Cancer is now the fourth leading cause of death among medically certified deaths in Malaysia and the estimated annual incidence of cancer is 30,000 (Gerard, 2002). The crude incidence rate showed an increasing trend of incidence with age. The incidence for males aged 40-59 years and aged above 60 are 168.6 and 732.8 per 100,000 population respectively. While the incidence for females for the two age groups are 318.2 and 591.1 per 100,000 population respectively (Second Report of the National Cancer Registry Cancer Incidence In Malaysia, 2003).

There are many issues pertaining to management of elderly cancer patients. Several studies of older cancer patients have revealed a significant amount of important clinical information such as the degree and severity of co-morbidity and its effect on treatment, the role of polypharmacy, and the various social and financial problems facing older patients with cancer. Frailty is

used as the criterion to select elderly persons at risk for interventions, but an elderly person is not equivalent to frail if he or she is independent and physically and mentally fit. Therefore, chronological age should not be used solely in selecting patients for procedures or treatments (Schuurmans, 2004).

Several studies have identified suboptimal treatment and inadequacies of care received by elderly patients with cancer (Berrino, 1999; Biganzoli and Aapro, 2003; Peake, 2003; Folprecht et al., 2004; Surbone, 2007). They are less likely offered optimal treatment due to concerns over their physical and mental frailty as well as the fact that they are more likely to have co-morbidities and age-specific deteriorating organ reserve which could make them less tolerance to chemotherapy and/or surgery. These perceptions continue is due to the lack of awareness among physicians of the emerging evidence that fit, elderly patient have a relatively similar survival to younger counterparts when given comparable treatment (Papamichael et al., 2009; Kow et al., 2012). On the other hand, modified chemotherapy which balanced between the effectiveness and side effects makes chemotherapy feasible in these patients too (Katherine et al., 2010; Elisabeth, 2012; Spina et al., 2012).

Another important issue is that treatment for elderly cancer patients may be perceived as a waste of socio-

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economic resources. Consequently, elderly cancer patients may be directly or indirectly denied from receiving treatment because a large proportion of our elderly people are financially dependent on their caregivers. Beside that, a peculiar issue in our society is that the decision making for elderly patients is always in the hands of caregivers. It is because they are labelled as incapable of understanding medical terms and frequently they are assumed to be mentally not strong enough to accept the fact of having cancer. Furthermore, elderly cancer patients are perceived as not willing to undertake chemotherapy. However, there are studies proven that majority of elderly patients are willing to have chemotherapy if they had cancer (Slevin et al., 1999; Extermann et al., 2003).

The primary objective of this study was to assess the willingness of accepting chemotherapy among elderly Malaysian patients and the secondary objective was to identify factors that affecting their willingness of receiving chemotherapy.

## Materials and Methods

This was a cross-sectional study. Patients above 60 years old were recruited from various clinics in University Malaya Medical Centre from November 2008 to March 2009. Patients who gave informed consent were interviewed with a questionnaire which comprised of a scenario of side effects of strong and mild chemotherapy. Patients were then asked to express their willingness to undertake chemotherapy. Patients' age, marital status, education level, and presence of caregiver are identified. For patients with history of cancer, they are excluded if they had cancer therapy less than a year prior to the interview. A general exclusion criterion was medical diagnosis of dementia, identified from medical records. This study was approved by the hospital ethic committee board.

All data were analysed using the Statistical Package for Social Scientists (SPSS version 17.0) Descriptive statistics were reported as means (with SD) for continuous variables and frequencies and percentages for categorical variables. Continuous variables were analysed using the logistic linear regression test. Non continuous variables were compared using the Chi square test.

## Results

Table 1 shows the characteristics of patients. There were 75 patients enrolled in the survey. The age ranged from 61-88 years old (median 73 years old). Chinese patients consisted of 38.7% (29) while there were 26.7% (20) of Malay, 29.3% (22) of Indian and 5.3% (4) of other ethnic group. 46.7% (35) of the patients had previous history of cancer. Majority of the patients had good performance status, 70 patients (93.3%) had ECOG score of 0 and there was one patient each for score 1, 2 and 3. 45 patients (60%) rated their health as good, 21 of them (28%) rated their health as fair and nine (12%) rated themselves as having excellent health status.

Table 2 shows the willingness of receiving strong and mild chemotherapy according to patient's characteristics. There were 55 patients (73.3%) willing to receive strong

**Table 1. Characteristic of Patients**

		N	%
Ethnicity	Malay	20	26.7
	Chinese	29	38.7
	Indian	22	29.3
	Others	4	5.3
Educational Level	Illiterate	6	8.0
	Primary	20	16.6
	Secondary	31	41.4
Gender	Tertiary	18	24.0
	Male	33	44.0
	Female	42	56.0
Self-rated health	Fair	21	28.0
	Good	45	60.0
	Excellent	9	12.0
Cancer	Yes	35	46.7
	No	40	53.3
ECOG	0	70	93.3
	1	3	4.0
	2	1	1.3
Caregiver(presence during interview)	3	1	1.3
	Yes	21	28.0
	No	54	72.0

\*Age ranged from 61 to 88 years old (median 73)

**Table 2. Ethnic vs Cancer vs Willingness**

	Strong chemotherapy			Mild chemotherapy		
	Willing	Not willing	P value	Willing	Not willing	P value
Overall	55 (73.3)	20 (26.7)		65 (86.7)	10 (13.3)	
Chinese						
Cancer	21 (95.5)	1 (4.5)	0.001	22(100)	0 (0)	0.01
No cancer	2 (28.6)	5 (71.4)		4 (57.1)	3 (42.9)	
Malay						
Cancer	6 (87.5)	1 (14.3)	0.561	7(100)	0 (0)	0.65
No cancer	10 (76.9)	3 (23.1)		12 (92.3)	1 (7.7)	
Indian						
Cancer	4 (66.7)	2 (33.3)	0.631	4 (66.7)	2 (33.3)	0.541
No cancer	10 (62.5)	6 (37.5)		12 (75.0)	4 (25.0)	
Others						
Cancer	0 (0)	0 (0)	-	0 (0)	0 (0)	-
No cancer	3 (75.0)	1 (25.0)		4(100)	0 (0)	

chemotherapy and the percentage increased to 86.7% if it was mild chemotherapy. History of cancer was found to be significantly influencing patient's willingness to accept strong chemotherapy (P=0.005). For strong chemotherapy, 89% of patients willing to have chemotherapy for those who had cancer before, on the hand, only 63% of patients who had no cancer before were willing to receive chemotherapy. While for mild chemotherapy, patients with history of cancer were more willing to have chemotherapy (94% vs 80%) but it was not statistically significant (P=0.068). Other characteristics such as gender, educational level and ethnic group did not affect the willingness of accepting chemotherapy.

Table 3 shows sub-analysis of influence of previous cancer on the willingness of accepting chemotherapy among different ethnic groups. History of cancer strongly influenced the willingness for Chinese patients if compared to other ethnic groups. 95.5% and 100% of Chinese patients with history of cancer were willing to accept strong and mild chemotherapy respectively,

whereas only 28.6% and 57.1% of Chinese patients without history of cancer were willing to receive strong and mild chemotherapy respectively. The P values for these two chemotherapy groups were 0.001 and 0.010 respectively.

## Discussion

The results of this survey revealed that majority of our elderly patients were willing to accept chemotherapy, especially mild chemotherapy. It indicates that they were able to decide the best management for themselves after weighing between the benefits and adverse effects. In addition, it is also revealed that they were able to accept the bad news of having cancer even though cancer is still a stigma in our society.

Another interesting finding in this survey is that majority of Malay were willing to accept chemotherapy. This is in contrary with the general observation that a large proportion of Malay patients are avoiding chemotherapy. The difference is because the Malays recruited in this survey were those had higher education and living in city. They were more equipped with the modern medical knowledge if compared to rural Malays. Further studies to compare rural and urban Malay patients would be worth doing.

The main pitfall of chemotherapy is its toxic adverse effects. It can be assumed from this survey that the main factor that influenced the willingness of accepting chemotherapy among elderly patients was the side effects. It is because there were more patients willing to receive mild chemotherapy that has milder side effects if compared to strong chemotherapy as was described in the questionnaires. The side effect of chemotherapy has been heavily publicised and therefore, general public including elderly patients had heard about and aware of it. However, the detail of the side effects such as its severity and frequency was not explained. In addition, the message that these side effects are preventable and treatable with medications is not properly delivered. As a result, the impression on side effects of chemotherapy among public is bias and skewed. Therefore, correct information given by appropriate medical profession is essential to alleviate unnecessary worries and fears toward chemotherapy among the patients.

In this study, patients who had history of cancer were more willing to receive chemotherapy especially the option of mild chemotherapy where 100% of them were willing to accept the treatment. This is consistent with a study done before (Extermann et al., 2003). For this group of patients, the experience they encountered with previous treatment obviously had positive influence on their willingness. They were aware that side effects of chemotherapy were tolerable. This difference is much more significant among Chinese patients. 71.4% of those who had no history of cancer refused strong chemotherapy, and 42.9% of this same group of patients refused mild chemotherapy. However, for patients who had cancer, 95.5% of them were willing to have strong chemotherapy whereas 100% of them were willing if they were giving mild chemotherapy. This finding is not noted

in other ethnic groups. Chinese society generally still have strong believe in Chinese medicine. They believed that it is a wholly and natural therapy that does not have side effect (Rance and Lee, 1980; Lam et al., 2009; Loh, 2009; Liu, 2012). Therefore, it is not surprise that a large proportion of Chinese patients without cancer refused to receive chemotherapy. But similar to other ethnic groups, experience has offset the false believe and fear.

In conclusion, this study has shown that elderly patients were willing to have chemotherapy if they were allowed to express their own wish. In addition, this study also proven that they were able to understand medical scenario and make a decision based on their judgments and preferences. Therefore, elderly patients should not be denied from the involvement of decision making and their treatment for cancer should not be compromised as a result of their vulnerable socio-economic status (Lodovico, 2003). The fear of side effects of chemotherapy is the main hurdle for patients to receive chemotherapy. It can be overcome by delivering accurate information to the public. Support group from cancer survivors is important to educate patients and public regarding chemotherapy. Effective collaboration between oncologist and geriatrician is important in managing elderly cancer patients (Lichtman, 2003; Papamichael et al., 2009; Denice, 2012; Soubeyran et al., 2012). Further study should be done to identify specifically the reasons that may influence the willingness of receiving chemotherapy such as financial issue among elderly patients.

## References

- Berrino F, Capocaccia R, Esteve J, Gatta G (1999). Survival of cancer patients in Europe: The EURO CARE-2 Study. *IARC Sci Publ*, **151**, 1-572.
- Biganzoli L, Aapro M (2003). Adjuvant chemotherapy in the elderly. *Ann Oncol*, **14**, 1-3.
- Denice E, Arti H, Marcia G (2012). Integrating a cancer-specific geriatric assessment into survivorship care. *Clin J of Oncol Nurs*, **16**, 78-85.
- Doyle C, Crump M, Pintilie M, et al (2001). Does palliative chemotherapy palliate? Evaluation of expectations, outcomes, and cost in women receiving chemotherapy for advanced ovarian cancer. *J Clin Oncol*, **19**, 1266-74.
- Extermann M, Albran G, Chen H, et al (2003). Are older French patients as willing as older American patients to undertake chemotherapy? *J Clin Oncol*, **21**, 3214-9.
- Folprecht G, Cunningham D, Ross P, et al (2004). Efficacy of 5-fluorouracil-based chemotherapy in elderly patients with metastatic colorectal cancer: a pooled analysis of clinical trials. *Ann Oncol*, **15**, 1330-8.
- Kahn KL, Adams JL, Weeks JC, et al (2010). Adjuvant chemotherapy use and adverse events among older patients with stage III colon cancer. *JAMA*, **303**, 1037-45.
- Kow AW, Sadayan NA, Emest A, et al (2012). Is pancreaticoduodenectomy justified in elderly patients? *Surgeon*, **10**, 128-36.
- Lam YC, Cheng CW, Peng H, et al (2009). Cancer patients' attitude towards Chinese medicine: a Hong Kong survey. *Chinese Medicine*, **4**, 25.
- Lee PR (1980). Perceptions and uses of Chinese medicine among the Chinese in Hong Kong. *Culture, Medicine and Psychiatry*, **4**, 345-75.

- Lichtman SM (2003). Guidelines for the Treatment of Elderly Cancer Patients. *Cancer Control*, **10**, 445-53.
- Lim GC (2002). Overview of Cancer in Malaysia. *Jpn J Clin Oncol*, **32**, 37-42.
- Liu TG, Xiong SQ, Yan Y, Zhu H, Yi C (2012). Use of Chinese herb medicine in cancer patients: a survey in Southwestern China. *Evid Based Complement Alternat Med*, **2012**, 769042.
- Lodovico Balducci (2003). New paradigms for treating elderly patients with cancer: the comprehensive geriatric assessment and guidelines for supportive care. *J Support Oncol*, **1**, 30-7.
- Loh CH (2009). Use of traditional chinese medicine in Singapore children: perceptions of parents and paediatricians. *Sing Med J*, **50**, 1162-7.
- Papamichael D, Audisio R, Horiot JC, et al (2009). Treatment of the elderly colorectal cancer patient: SIOG expert recommendations. *Ann Oncol*, **20**, 5-16.
- Papamichael D, Audisio R, Horiot JC, et al (2009). Treatment of the elderly colorectal cancer patient: SIOG expert recommendations. *Ann Oncol*, **20**, 5-16.
- Peake MD, Thompson S, Lowe D, et al (2003). Ageism in the management of lung cancer. *Age Ageing*, **32**, 171-7.
- Quoix E (2012). Therapeutic options in older patients with metastatic non-small cell lung cancer. *Ther adv Med Oncol*, **4**, 247-54.
- Schuermans H, Steverink N, Lindenberg S, Frieswijk N (2004). Slaets, old or frail: what tells us more. *J Gerontol Series A Biol Sci Med Sci*, **59**, 962-5.
- Second Report of the National Cancer Registry Cancer Incidence In Malaysia 2003. <http://www.radiologymalaysia.org/Archive/NCR/2ndNCR.pdf>
- Slevin ML, Stubbs L, Plant HJ, et al (1990). Attitudes to chemotherapy: Comparing views of patients with cancer with those of doctors, nurses, and general public. *BMJ*, **300**, 1458-60.
- Soubeyran P, Fonck M, Blanc-Bisson C, et al (2012). Predictors of early death in older patients treated with first-line chemotherapy for cancer. *J Clin Oncol*, **30**, 1829-34.
- Spina M, Balzarotti M, Uziel L, et al (2012). Modulated chemotherapy according to modified comprehensive geriatric assessment in 100 consecutive elderly patients with diffuse large B-cell lymphoma. *Oncologist*, **17**, 838-46.
- Surbone A, Kagawa-Singer M, Terret C, et al (2007). The illness trajectory of elderly cancer patients across cultures: SIOG position paper. *Ann Oncol*, **18**, 633-8.