

The measurement of willingness to pay for mass cancer screening with whole-body PET (positron emission tomography)

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Objective: Recently, we have seen an increase in the number of studies that measured the willingness to pay (WTP) for medical services using the contingent valuation method (CVM) and evaluated the benefits of these services. This study aimed to measure the general public's WTP for cancer screening with positron emission tomography (PET) and to determine consumer characteristics that may affect their WTP. **Methods:** A questionnaire survey of males and females living in Japan aged between 40 and 59 years was conducted via the Internet. A total of 274 individuals accepted the offer to participate and were enrolled in the study. The study participants were divided into two groups: Group A (n = 138) and Group B (n = 136). Group A was provided only with information about the PET procedure and the high cancer detection rate; Group B was provided with additional information regarding the possibility of 'false negative' and 'false positive' results and the fact that the efficacy of PET screening for reducing mortality has not yet been demonstrated. Participants were then asked to answer their WTP for cancer screening with PET by payment cards approach. **Results:** The overall average amount consumers were willing to pay for PET cancer screening was \$103.7 (n = 274). The average value in Group A was \$107.3, the average value in Group B was \$100.0 and there was no statistically significant difference between the groups. The results of categorical regression analysis showed that household annual income was the only significant factor affecting WTP. **Conclusions:** Our study showed that household annual income affected the WTP for cancer screening with PET and therefore the demand for PET screening would be limited to the high-income group. Negative information about PET did not reduce the WTP. This finding suggests that test subjects mainly evaluated the high detection rate of PET screening and the 'reassurance' value of receiving negative screening results.

Key words: willingness to pay, contingent valuation method, cancer screening, positron emission tomography