**Supplementary file 1 : Attitudinal questions related to cancer management**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Agree | Strongly agree |
| I would like to limit my trips |  |  |  |  |
| I would like to limit my waiting time |  |  |  |  |
| I would like to stay close to my family |  |  |  |  |
| I would like to change my habits and my way of life as little as possible |  |  |  |  |
| I would like to separate place of care and home |  |  |  |  |
| I'm afraid of being a burden to my family |  |  |  |  |
| It is difficult for me to be with other patients |  |  |  |  |
| I feel alone in my home |  |  |  |  |
| Outside care allows you to see other people |  |  |  |  |
| Home caregivers are more available |  |  |  |  |
| In case of additional costs related to home care, I can’t afford them |  |  |  |  |
| It is difficult for me to perform daily tasks |  |  |  |  |
| Hospital is frightening |  |  |  |  |
| The trips are painful for me |  |  |  |  |
| I think my family can take care of me |  |  |  |  |
| I had a bad experience in home care |  |  |  |  |
| I had a bad experience in hospital care |  |  |  |  |
| I think my home is not adapted to home care |  |  |  |  |

**Supplementary file 2: WTP question and payment card**

Distal order effect can be created by the sequence in which information is presented in the preamble to a WTP question[[1]](#footnote-1). To avoid distal ordering effect, the 3 options were randomly presented to participants.

The initial payment card amounts were fixed from 0 to 15€ they are derived from the previous studies of the team. A first qualitative pre-test among a convenient sample of lay individuals (n=12) confirmed this initial version. However, because this point is a central methodological issues, we have realized another pre-test of this PC administrated online by the national survey institute Research Now among 100 individuals from the general population in the same condition than the final survey. The median WTP were between 5 and 10 according to scenarios (respectively lightest and heaviest scenario) and less than 2% of individuals gave another amount higher than 15€. Finally, we decided to include two additional amounts, 20 and 25 to avoiding bias. Finally, the respondents were asked to indicate their maximum willingness to pay with the use of a vertical payment card where the amount payment bids ranged from 0 to 25 euros with the possibility to give another amount. Moreover, it has been demonstrated that monthly payments result in a higher WTP than annual payments[[2]](#footnote-2)[[3]](#footnote-3)[[4]](#footnote-4). To avoid this “framing effect” we decided to present both a monthly payment and its annual equivalent[[5]](#footnote-5). We thus allowed respondents to improve their estimate of the opportunity cost associated with paying for the treatment options.

**ENGLISH TRANSLATION:**

How much are you willing to pay at maximum by month per household to benefit from home/ Local health center in case of cancer?

|  |
| --- |
| Maximal amount |
| 1 | 0€ |
| 2 | 1€/month/household (or 12€/year) |
| 3 | 2€/month/household (or 24€/year) |
| 4 | 3€/month/household (or 36€/year) |
| 5 | 5€/month/household (or 60€/year) |
| 6 | 8€/month/household (or 96€/year) |
| 7 | 10€/month/household (or 120€/year) |
| 8 | 15€/month/household (or 180€/year) |
| 9 | 20€/month/household (or 240€/year) |
| 10 | 25€/month/household (or 300€/year) |
| 11 | Other amount higher Please specify......... |

**ORIGINAL VERSION:**

*La prise en charge standard du cancer est une prise en charge à l’hôpital.*

*Par conséquent, pour que* ***vous et les membres de votre foyer*** *puissiez bénéficier d’une prise en charge à domicile ou en maison de santé, en cas de besoin,* ***il vous faudrait payer dès aujourd’hui et ce tous les mois une taxe supplémentaire*** *qui permettrait au système de santé de* ***développer les structures nécessaires*** *à cette prise en charge.*

*Pour chacun des scénarios que nous vous avons présentés, indiquez combien seriez-vous prêt à payer au maximum par mois pour l’ensemble de votre foyer, afin de pouvoir bénéficier de cette prise en charge.*

***Si vous ne souhaitez pas payer pour une prise en charge à domicile ou en maison de santé, la prise en charge de votre cancer sera faite à l’hôpital.***

Merci de prendre en considération le revenu de votre foyer afin d’être certain(e) que le montant que vous allez nous indiquer est réaliste et soutenable financièrement pour vous. Ayez en tête que, l’argent que vous allez dépenser pour cette prise en charge ne sera plus disponible pour d’autres biens ou d’autres services.

IMPORTANT : PLUSIEURS QUESTIONS PEUVENT VOUS ÊTRE POSÉES. AYEZ EN TETE QUE L’ENSEMBLE DES MONTANTS QUE VOUS ALLEZ DONNER SE CUMULENT ENTRE EUX : C’est comme si vous preniez différentes options d'assurance. Vous ne savez pas à l’avance quel type de cancer et donc de soins vous aurez besoin. Vous pouvez donc souscrire à plusieurs options. Chacune de ces options vous ouvrira des droits spécifiques qui correspondent au remboursement de l’intégralité des soins nécessaires dans chacun des scénarios, dans le lieu que vous préférez.

POUR LE SCENARIO 1, VOUS NOUS AVEZ INDIQUE QUE VOUS PREFERERIEZ

*Nous vous rappelons que dans ce scénario, votre prise en charge consisterait essentiellement en des* ***chimiothérapies courtes*** *(<1 heure)* ***tous les mois*** *durant pendant 6 à 12 mois.*

Dans le cas où vous seriez atteint(e) d’un cancer, combien seriez-vous-prêt(e) à payer au maximum par mois pour que l’ensemble des membres de votre foyer puissent bénéficier de cette prise en charge [ domicile/sTRUCTURE DE PROXIMITE] ?

|  |
| --- |
| Montant maximal |
| 1 | 0€ |
| 2 | 1€/mois/foyer (soit 12€/an) |
| 3 | 2€/mois/foyer (soit 24€/an) |
| 4 | 3€/mois/foyer (soit 36€/an) |
| 5 | 5€/mois/foyer (soit 60€/an) |
| 6 | 8€/mois/foyer (soit 96€/an) |
| 7 | 10€/mois/foyer (soit 120€/an) |
| 8 | 15€/mois/foyer (soit 180€/an) |
| 9 | 20€/mois/foyer (soit 240€/an) |
| 10 | 25€/mois/foyer (soit 300€/an) |
| 11 | Autre montant supérieur, Précisez........**.** |

**Supplementary file 3 : Hypotheses about WTP determinants**

|  |  |
| --- | --- |
| **Explicative variables** | **Hypothesis** |
| Socio-economic data:  |  |
| Gender | Generally, females are willing to pay less than males |
| Age | Positive correlation between age and WTP |
| Education  | Positive correlation between the level of education and WTP |
| Number of person in the household | Positive correlation between the number of person living at home and WTPbecause more people could benefit from the option |
| Socio-professional category | High socio-professional category is associate with high WTP |
| WTP reflects ability to pay: household income (four dummy variables possession of private health insurance | Income would be positively correlated with WTP because it permits private health insurance  |
| Attitudes towards cancer: \*whether they perceived their chances of contracting cancer it to be above average (dummy=1)\*Quality of life  | Intuition would lead us to expect higher WTP values from those perceiving themselves to be particularly at-risk ceteris paribusA poor QoL would be associated with lower WTP |
| Experience: whether or not the subject or their relative had previous experience of cancer or management of care at home/LHC/hospital | Experience of cancer would be positively correlated with WTP |
| Preferences: as the strength of preferences measured with VAS | Preference would be positively correlated with WTP |
| Subjects expressed difficulties in estimating WTP: degree of certainty of WTP | Certainty respondents would have a higher WTP |

Supplementary file 4 : Interval regression analysis of WTP according to scenario and preferred option on “sure” sub-sample

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Scenario 1 Home** | **Scenario 1 LHC** | **Scenario 2 Home** | **Scenario 2 LHC** | **Scenario 3 Home** | **Scenario 3 LHC** |
|  | **Coef.** | **sd** | **pvalue** | **Coef.** | **Sd** | **pvalue** | **Coef.** | **Sd** | **pvalue** | **Coef.** | **Sd** | **pvalue** | **Coef.** | **Sd** | **pvalue** | **Coef.** | **Sd** | **pvalue** |
| **Gender female (ref male)** | -0.243 | 0.160 | 0.129 | -0.515\* | 0.233 | 0.027 | -0.088 | 0.153 | 0.567 | -0.376 | 0.199 | 0.059 | -0.126 | 0.184 | 0.492 | -0.434\* | 0.220 | 0.048 |
| **Age (years)** | -0.012 | 0.006 | 0.053 | -0.008 | 0.008 | 0.316 | -0.008 | 0.006 | 0.174 | 0.000 | 0.007 | 0.962 | -0.002 | 0.008 | 0.770 | -0.018\* | 0.008 | 0.024 |
| **Socio-professional category (ref : high)** | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Low  | 0.559\*\* | 0.213 | 0.009 | 0.486 | 0.307 | 0.113 | 0.188 | 0.194 | 0.332 | 0.026 | 0.280 | 0.927 | 0.191 | 0.238 | 0.422 | -0.049 | 0.310 | 0.875 |
| Inactive | 0.476\* | 0.210 | 0.023 | 0.646\* | 0.320 | 0.044 | 0.366 | 0.188 | 0.052 | 0.236 | 0.272 | 0.387 | 0.197 | 0.240 | 0.413 | 0.050 | 0.323 | 0.878 |
| **Annual household income ( ref <€21.000)** | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| €21.000 to <€36.000 | 0.434\* | 0.219 | 0.048 | 0.645\* | 0.309 | 0.037 | 0.386 | 0.202 | 0.056 | 0.133 | 0.273 | 0.627 | 0.402 | 0.241 | 0.096 | 0.168 | 0.295 | 0.569 |
| >€36.000 | 0.937\*\*\* | 0.240 | 0.000 | 0.544 | 0.315 | 0.084 | 0.764\*\*\* | 0.217 | 0.000 | 0.492 | 0.294 | 0.095 | 0.784\*\* | 0.262 | 0.003 | 0.282 | 0.356 | 0.429 |
| Missing | 1.229\*\* | 0.398 | 0.002 | 1.007\* | 0.493 | 0.041 | 0.910\*\* | 0.325 | 0.005 | 0.538 | 0.398 | 0.177 | 1.181\*\* | 0.403 | 0.003 | 0.051 | 0.504 | 0.920 |
| **Perception of cancer risk (ref : High or very high)** | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Moderately high | 0.290 | 0.218 | 0.184 | 0.443 | 0.351 | 0.207 | 0.328 | 0.215 | 0.126 | 0.380 | 0.313 | 0.225 | 0.330 | 0.261 | 0.206 | -0.174 | 0.342 | 0.612 |
| Low or very low | 0.292 | 0.239 | 0.222 | 0.711\* | 0.357 | 0.047 | 0.334 | 0.230 | 0.147 | 0.636 | 0.341 | 0.062 | 0.235 | 0.281 | 0.403 | 0.041 | 0.356 | 0.909 |
| Do not know | 0.012 | 0.228 | 0.959 | 1.056\*\* | 0.328 | 0.001 | -0.041 | 0.213 | 0.847 | 0.816\* | 0.320 | 0.011 | 0.084 | 0.247 | 0.734 | -0.236 | 0.347 | 0.496 |
| **Strength of preference VAS from 0 to 10**  | 0.142\* | 0.064 | 0.026 | -0.174 | 0.103 | 0.091 | 0.144\*\* | 0.053 | 0.006 | 0.156 | 0.080 | 0.051 | 0.135\* | 0.066 | 0.040 | 0.234\* | 0.093 | 0.012 |
| **Quality of Life (VAS from 0 to 10)** |  |  |  |  |  |  |  |  |  |  |  |  | 0.053 | 0.057 | 0.349 | 0.158\* | 0.077 | 0.040 |
| lnsigma | 0.463 | 0.689 | 0.502 | 2.644\*\* | 0.918 | 0.004 | 0.671 | 0.556 | 0.228 | 0.239 | 0.820 | 0.771 | 0.162 | 0.839 | 0.847 | 0.036 | 0.920 | 0.968 |
| Constant | 0.130\*\* | 0.048 | 0.007 | 0.018 | 0.078 | 0.821 | -0.020 | 0.053 | 0.703 | 0.044 | 0.067 | 0.513 | 0.060 | 0.059 | 0.304 | 0.066 | 0.071 | 0.352 |
| **N. of cases** |  | 243 |  |  | 95 |  |  | 202 |  |  | 125 |  |  | 163 |  |  | 115 |  |
| **AIC** |  | 1036 |  |  | 437 |  |  | 863 |  |  | 554 |  |  | 725 |  |  | 515 |  |
| **BIC** |  | 1082 |  |  | 470 |  |  | 906 |  |  | 591 |  |  | 793 |  |  | 553 |  |
| **Log Likelihood** |  | -505 |  |  | -205 |  |  | -418 |  |  | -264 |  |  | -340 |  |  | -243 |  |
| **R2** |  | 0.123 |  |  | 0.194 |  |  | 0.148 |  |  | 0.148 |  |  | 0.134 |  |  | 0.224 |  |
| **chi2** |  | 31.9\*\*\* |  |  | 20.45\* |  |  | 32.3\*\*\* |  |  | 20.1\* |  |  | 23.4\* |  |  | 29.1\*\* |  |

\* p<0.05, \*\* p<0.01, \*\*\* p<0.

**Supplementary file 5: Proportion of respondents for whom the WTP was higher for the less severe scenarios**

Among respondents who had the same preference between two scenarios, the proportion who provided a higher WTP for the less severe scenarios was low: between 7.3% and 8.9% according to scenarios. They were kept in the analysis because their choice could be explained by a strength of preference which is lower for more severe scenarios being treated outside the hospital, a budget constraint, or any other reasons specific to each respondent.

|  |  |  |
| --- | --- | --- |
|  | Number of respondents who have the same preference between the two scenarios | Proportion of respondents for whom the WTP was higher for the less severe scenarios |
| S1-S2 | 289 | 7.3% (n=21) |
| S1-S3 | 216 | 7.4% (n=16) |
| S2-S3 | 270 | 8.9% (n=24) |

Interpretation: Among patients who did not change their preferences between scenario 1 & 2 (n=289), 21 respondents had provided higher WTP for S1 compared to S2.

**Supplementary file 6: Description of responses to the WTP questions**

A large majority of protesters declared they would refuse to pay for care. No significant differences were found in terms of gender, age, socio-professional category, income, personal situation (living with a partner, having children at home) or comprehension of information and cancer risk.

|  |  |  |  |
| --- | --- | --- | --- |
| Reason for zero WTP or no response | Scenario 1n (%) | Scenario 2n (%) | Scenario 3n (%) |
| **TRUE ZERO WTP** | **34/68 (50%)** | **23/66 (34.8%)** | **27/61 (44.3%)** |
| I do not have the money to pay for home care, even if I would like to use it | 17/68 (25.0%) | 9/66 (13.7%) | 14/61 (23.0%) |
| In hospital care is free. I prefer to be cared for in hospital | 17/68 (25.0%) | 14/66 (21.2%) | 13/61 (21.3%) |
| **PROTEST response** | **34/68 (50%)** | **43/66 (65.2%)** | **34/61 (55.7%)** |
| I did not understand the question | 0/68 (0.0%) | 0/66 (0.0%) | 0/61 (0.0%) |
| There was not enough information for me to choose | 3/68 (4.4%) | 7/66 (10.6%) | 1/61 (1.7%) |
| I refuse to pay for care | 22 /68 (32.0%) | 28/66 (42.4%) | 23/61 (37.7%) |
| Others | 9 /68 (13.2%) | 8/66 (12.1%) | 10/61 (16.4 %) |
| **Number of Zero or missing WTP n/N (%)** | **68/519 (13.1%)** | **66/ 504 (13.1 %)** | **61/ 407 (15.0 %)** |
| **Number of PROTEST responses n/N (%)** | **34/519 (6.5%)** | **43/504 (8.5%)** | **34/407 (8.3%)** |

1. Cai B, Cameron TA, Gerdes GR. Distal order effects in stated preference surveys. Ecological Economics. 2011 Apr 15;70(6):1101–8. [↑](#footnote-ref-1)
2. Gyrd-Hansen D, Jensen ML, Kjaer T. Framing the Willingness-to-Pay Question: Impact on Response Patterns and Mean Willingness to Pay. Health Econ. 2014 May 1;23(5):550–63. [↑](#footnote-ref-2)
3. Johannesson M, Johansson PO, Kriström B, Gerdtham UG. Willingness to pay for antihypertensive therapy—further results. Journal of Health Economics. 1993;12(1):95–108. [↑](#footnote-ref-3)
4. Soliño M, Vázquez MX, Prada A. Social demand for electricity from forest biomass in Spain: Does payment periodicity affect the willingness to pay? Energy Policy. 2009;37(2):531–40. [↑](#footnote-ref-4)
5. Champ PA, Bishop RC. Is willingness to pay for a public good sensitive to the elicitation format? Land Economics. 2006;82(2):162–173. [↑](#footnote-ref-5)