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*Public Opinion Poll*

&

Personalized Cancer Medicine

# Public Opinion Poll Germany “Personalized Cancer Medicine”

## Summary



Germans are most afraid of **cancer** (67%, p. 5). Correspondingly important to them is **cancer research** (p. 6), which in their view is driven above all by **academic research institutions** (80%). The biggest innovation drivers in cancer research, alongside established oncologists (30%), are clinics (26%) and research-based pharmaceutical companies (25%, p. 7).



Eight out of ten Germans support the **use of personalized patient data** if it helps to develop cancer drugs more quickly (page 9). More than three-quarters of them would also be willing to share their own personal data for cancer research with a trustworthy institution (p. 11). These include, primarily, the main drivers of innovation – academic research institutions (64%), oncologists (53%) and clinics (42%, p. 13).



In return for providing personal data, just under one in five expect **financial compensation**, e.g. in the form of lower health insurance contributions or a payment. One third, however, would provide data for free. More than a quarter of Germans would even welcome the need to make anonymous provision of data mandatory (p. 15).

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# Public Opinion Poll Germany “Personalized Cancer Medicine”

## Summary



In addition to sharing personal data, two-thirds of Germans would be willing to support **cancer research** by participating in studies. Asked about making further financial contributions (donations, additional health insurance contribution), Germans show significantly less support (p. 20).



Even though the **costs of modern drug cancer therapy**, at easily more than 50,000 euros per year and patient, exceed the average cost per insured person twelve-fold, six out of ten Germans consider these expenses to be justified, especially where the medical benefits of innovative medicine are proven (p. 17).

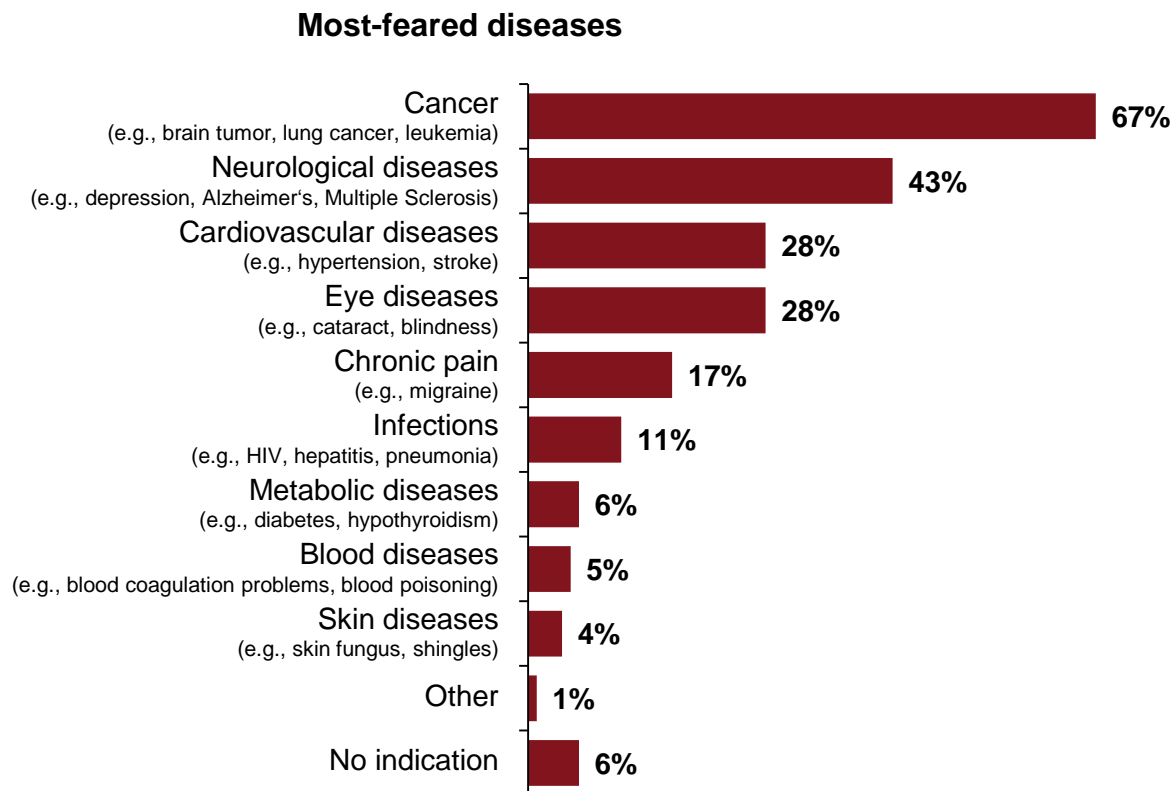


Three quarters of Germans support increased expansion of **centers of excellence** for cancer medicine (p. 19), e.g. for breast cancer or leukemia.

# *Results*

# Two-thirds of Germans are afraid of cancer

## Which diseases are feared?



Question A0: Which of the following diseases do you personally fear the most?

Base: all respondents, N = 1,002 (selection of up to three illnesses)

# ***Young people are more likely to be afraid of cancer, neurological diseases and infections***

## **Which diseases are feared?**

**Most-feared diseases**

<b>Basis</b>	<b>Age</b>						
	<b>Total</b>	<b>18-24 years</b>	<b>25-34 years</b>	<b>35-44 years</b>	<b>45-54 years</b>	<b>55-64 years</b>	<b>65+ years</b>
	<b>1002</b>	<b>105</b>	<b>130</b>	<b>156</b>	<b>195</b>	<b>167</b>	<b>249</b>
<b>Cancer</b> (e.g., brain tumor, lung cancer, leukemia)	<b>67%</b>	73%	67%	69%	69%	60%	65%
<b>Neurological diseases</b> (e.g., depression, Alzheimer's, Multiple Sclerosis)	<b>43%</b>	56%	34%	42%	38%	49%	42%
<b>Cardiovascular diseases</b> (e.g., hypertension, stroke)	<b>28%</b>	18%	27%	24%	31%	29%	31%
<b>Eye diseases</b> (e.g., cataract, blindness)	<b>28%</b>	33%	22%	20%	25%	31%	33%
<b>Chronic pain</b> (e.g., migraine)	<b>17%</b>	20%	21%	19%	17%	17%	11%
<b>Infections</b> (e.g., HIV, hepatitis, pneumonia)	<b>11%</b>	21%	16%	15%	10%	7%	4%
<b>Metabolic diseases</b> (e.g., diabetes, hypothyroidism)	<b>6%</b>	8%	8%	7%	4%	6%	6%
<b>Blood diseases</b> (e.g., blood coagulation problems, blood poisoning)	<b>5%</b>	9%	5%	4%	4%	4%	4%
<b>Skin diseases</b> (e.g., skin fungus, shingles)	<b>4%</b>	8%	6%	4%	4%	2%	3%
<b>Other</b>	<b>1%</b>	1%	1%	—	—	1%	1%
<b>No indication</b>	<b>6%</b>	3%	6%	5%	6%	8%	8%

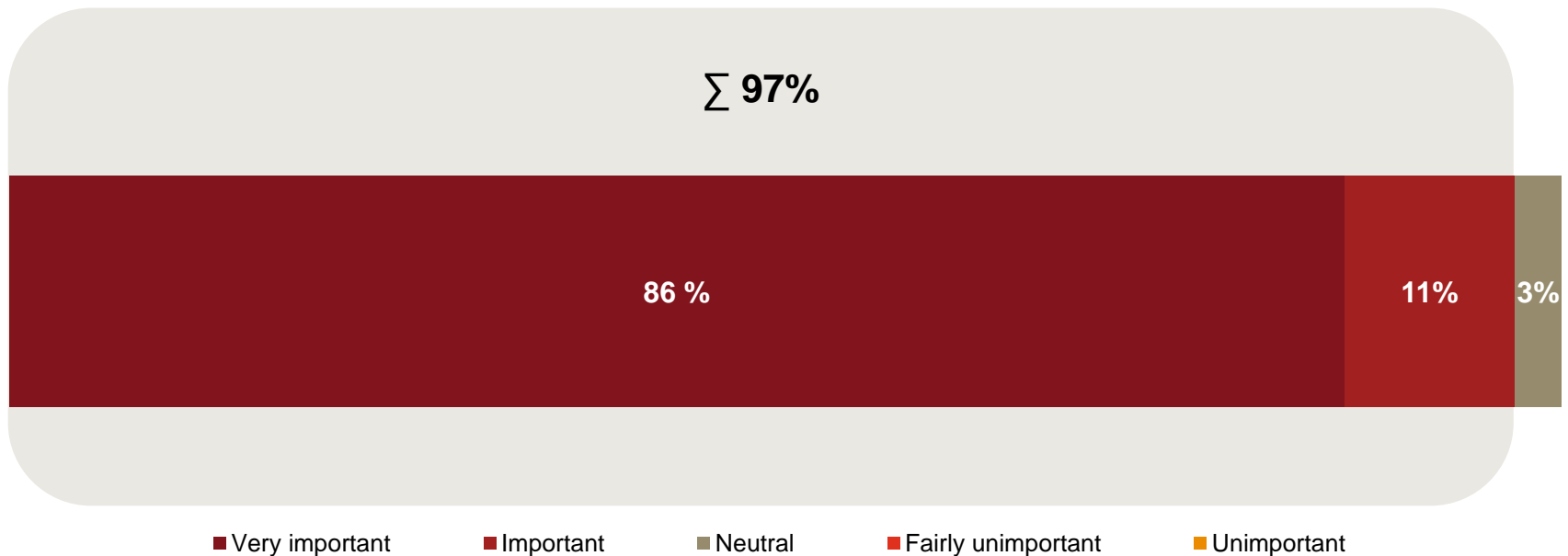
Question A0: Which of the following diseases do you personally fear the most?

Base: all respondents, N = 1,002 (selection of up to three illnesses)

# ***More than nine out of ten Germans consider cancer research to be important***

How important is cancer research?

Importance of cancer research

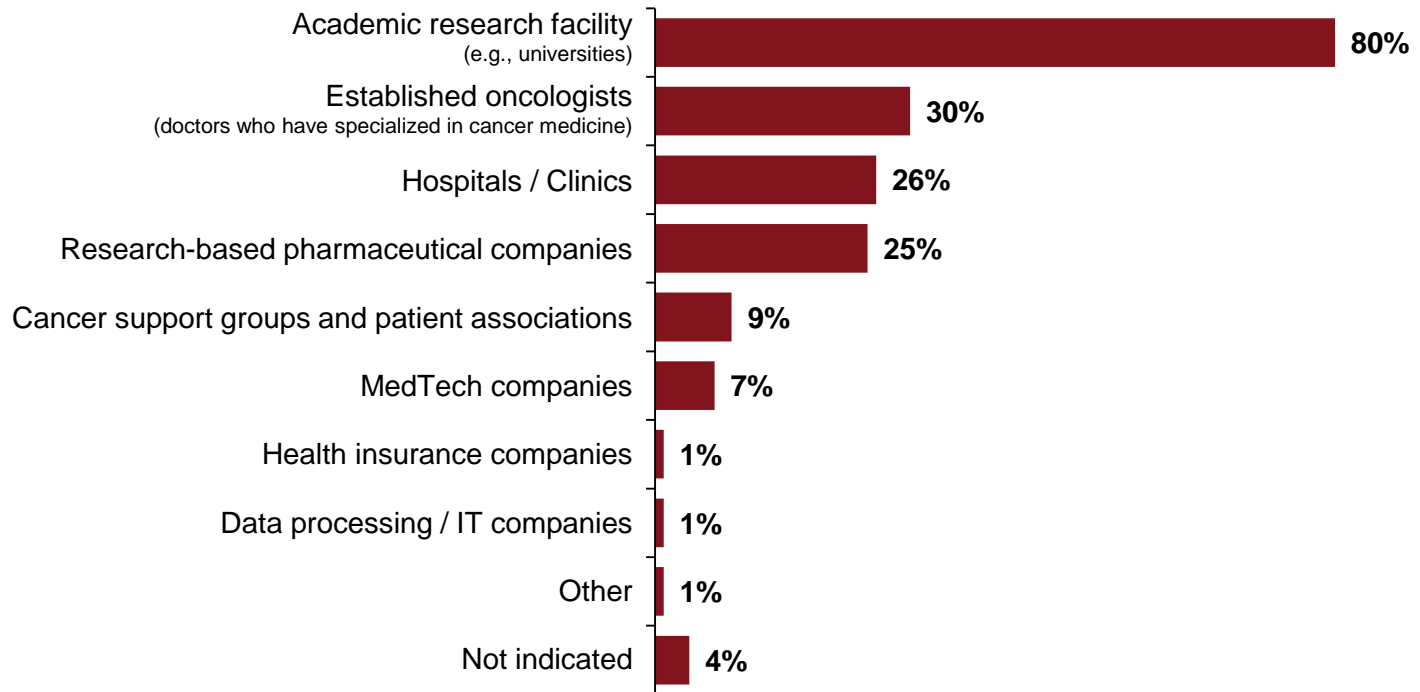


Question A1: How do you rate the general importance of cancer research (for example, on causes of development, development of new therapies)?  
Base: all respondents, N = 1,002 (single response)

# ***A quarter of the population thinks hospitals and research-based pharmaceutical companies are among the biggest innovation drivers in cancer research***

## **Who is the greatest innovator?**

**Greatest innovation power in cancer research**



Question A2: Who do you trust to be most innovative in the field of cancer research?  
Base: all respondents, N = 1,002 (selection of up to three institutions)



# ***Younger people more likely to credit clinics and medical technology companies with the greatest power to innovate***

Who is the greatest innovator?

## **Greatest innovation power in cancer research**

<b>Basis</b>	<b>Age</b>						
	<b>Total</b>	<b>18-24 years</b>	<b>25-34 years</b>	<b>35-44 years</b>	<b>45-54 years</b>	<b>55-64 years</b>	<b>65+ years</b>
	<b>1002</b>	<b>105</b>	<b>130</b>	<b>156</b>	<b>195</b>	<b>167</b>	<b>249</b>
<b>Academic research facility</b> (e.g., universities)	<b>80%</b>	74%	75%	82%	79%	79%	84%
<b>Established oncologists</b> (doctors who have specialized in cancer medicine)	<b>30%</b>	45%	31%	22%	26%	31%	31%
<b>Hospitals / Clinics</b>	<b>26%</b>	37%	39%	22%	24%	27%	20%
<b>Research-based pharmaceutical companies</b>	<b>25%</b>	25%	19%	23%	33%	27%	22%
<b>Cancer support groups and patient associations</b>	<b>9%</b>	8%	11%	12%	9%	9%	7%
<b>Medical engineering companies</b>	<b>7%</b>	12%	10%	9%	7%	6%	4%
<b>Health insurances</b>	<b>1%</b>	3%	4%	1%	0%	1%	—
<b>Data processing / IT companies</b>	<b>1%</b>	4%	1%	—	1%	—	0%
<b>Other</b>	<b>1%</b>	1%	1%	—	0%	2%	0%
<b>Not indicated</b>	<b>4%</b>	4%	5%	4%	4%	6%	3%

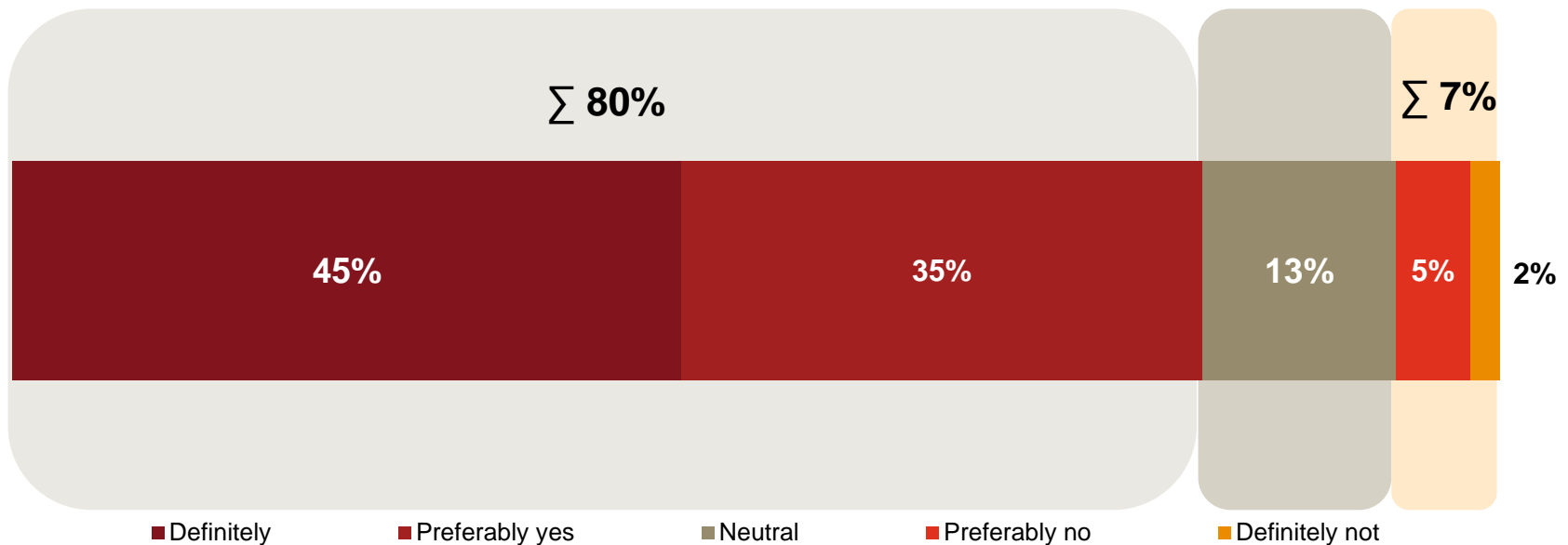
Question A2: Who do you trust to be most innovative in the field of cancer research?

Base: all respondents, N = 1,002 (selection of up to three institutions)

# ***Eight in ten Germans advocate the use of personalized patient data to accelerate the development of anticancer drugs – even at a potentially higher risk***

## **Personal data for shortened development time?**

Advocates using personalized patient data for accelerated drug development ...



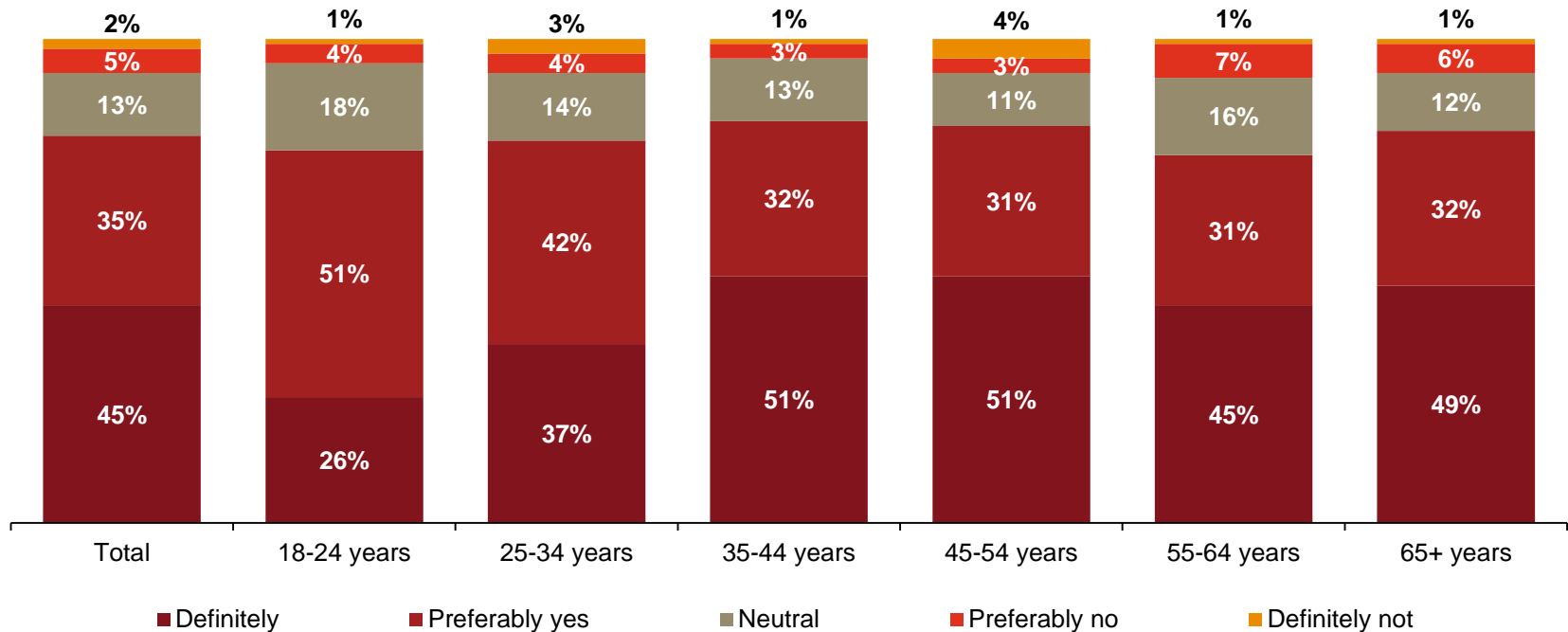
Question A3.1: Would you support shortened development time by systematically collecting and evaluating personalized patient data for cancer drugs? [Less extensive clinical trials on drug efficacy and safety could be associated with increased risk.]

Base: all respondents, N = 1,002 (single response)

# ***In the middle age groups, agreement to the use of personalized data is particularly high***

## **Personal data for shortened development time?**

**Advocates using personalized patient data for accelerated drug development ...**



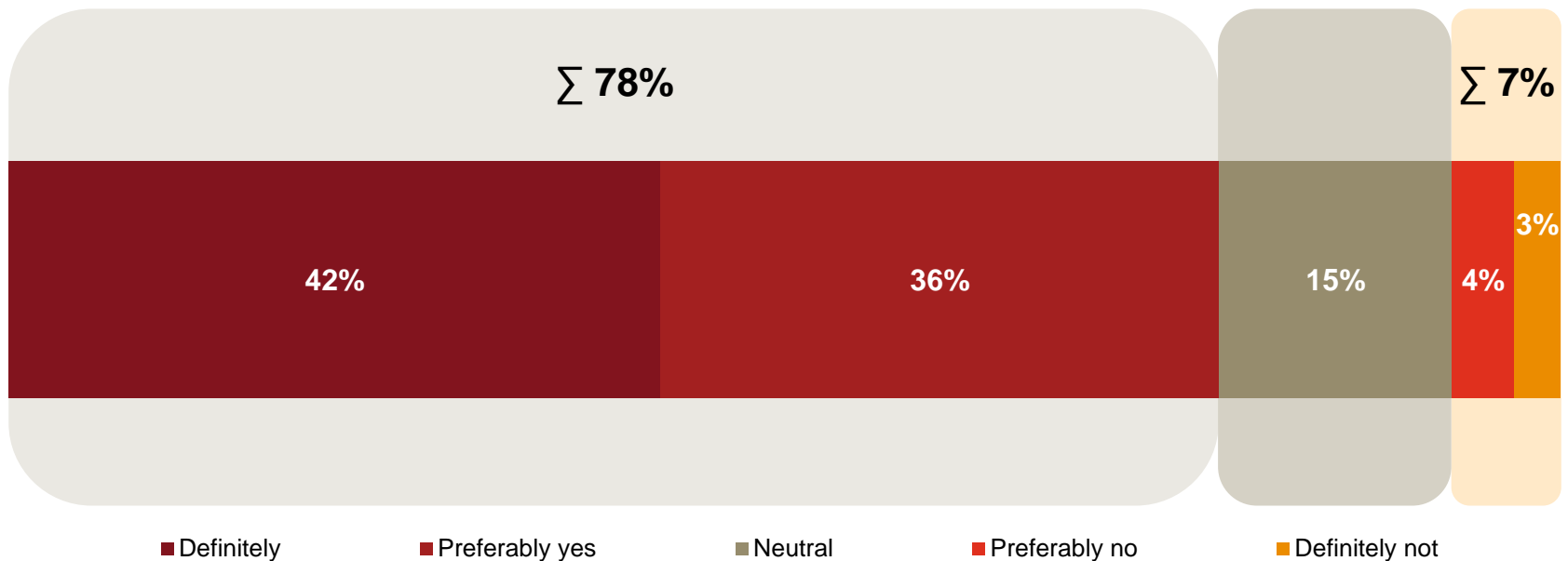
*Question A3.1: Would you support shortened development time by systematically collecting and evaluating personalized patient data for cancer drugs? [Less extensive clinical trials on drug efficacy and safety could be associated with increased risk.]*

*Base: all respondents, N = 1,002 (single response)*

# Over three-quarters of Germans would share personal information with a trusted institution for cancer research

## Share personal information with other institutions?

Willingness to share personal information for cancer research



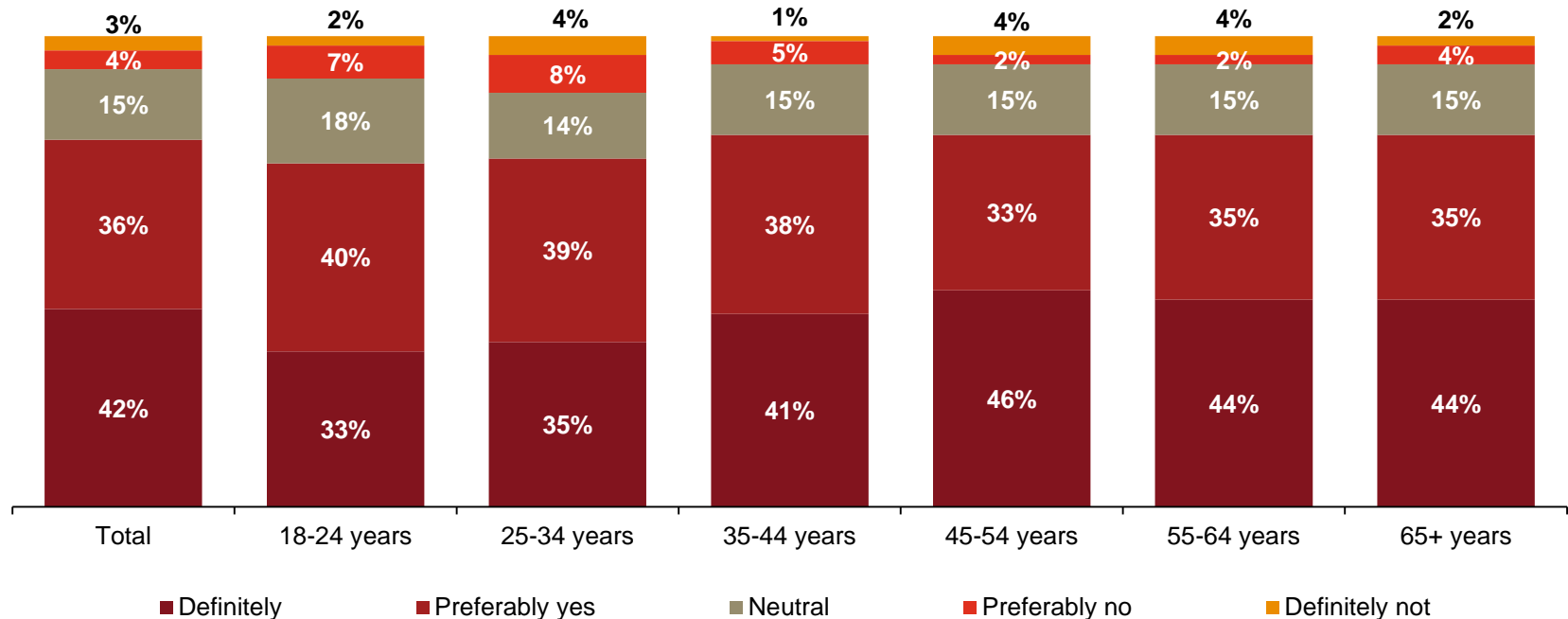
Question A4.1: For the benefit of cancer research or better cancer treatment options, would you be willing to share your personal information (such as 'genetic fingerprint', treatment data) with a trustworthy institution and with the strictest data security?

Base: all respondents, N = 1,002 (single response)

# ***Unlimited willingness to share personal data for cancer research is less pronounced among younger people***

## **Share personal information with other institutions?**

**Willingness to share personal information for cancer research**



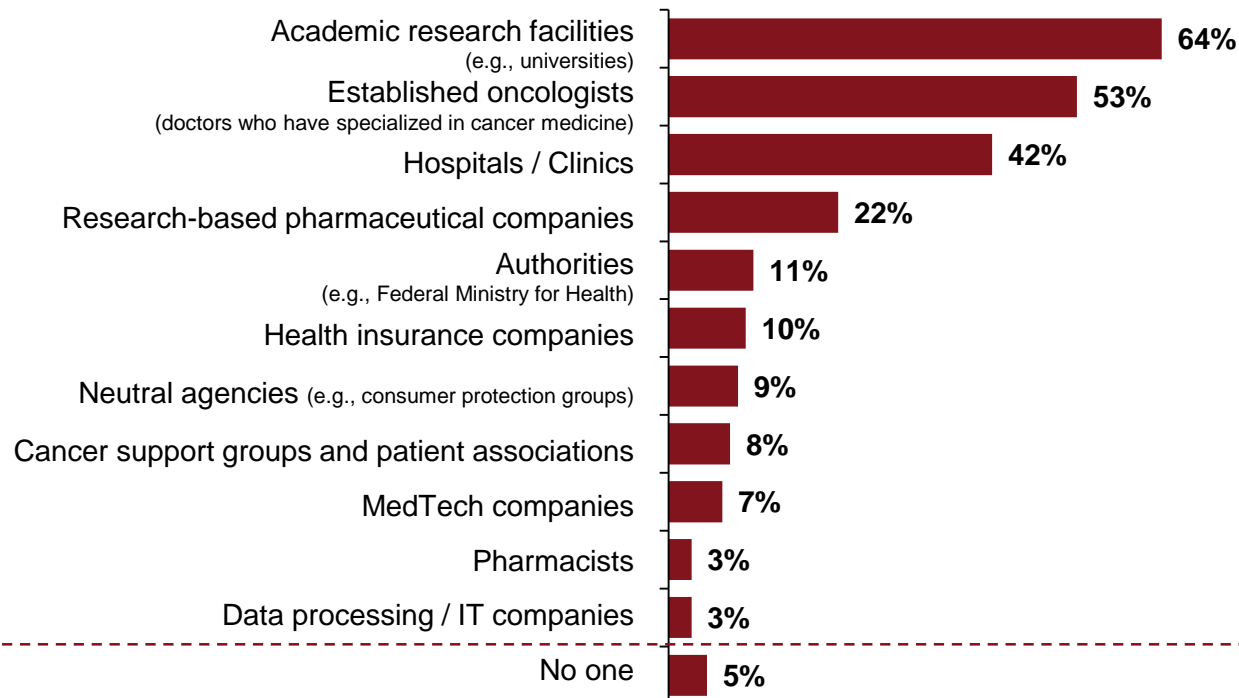
Question A4.1: For the benefit of cancer research or better cancer treatment options, would you be willing to share your personal information (such as 'genetic fingerprint', treatment data) with a trustworthy institution and with the strictest data security?

Base: all respondents, N = 1,002 (single response)

# ***Germans are most likely to entrust their data to academic research institutions, oncologists and clinics***

## **Who should get personalized data?**

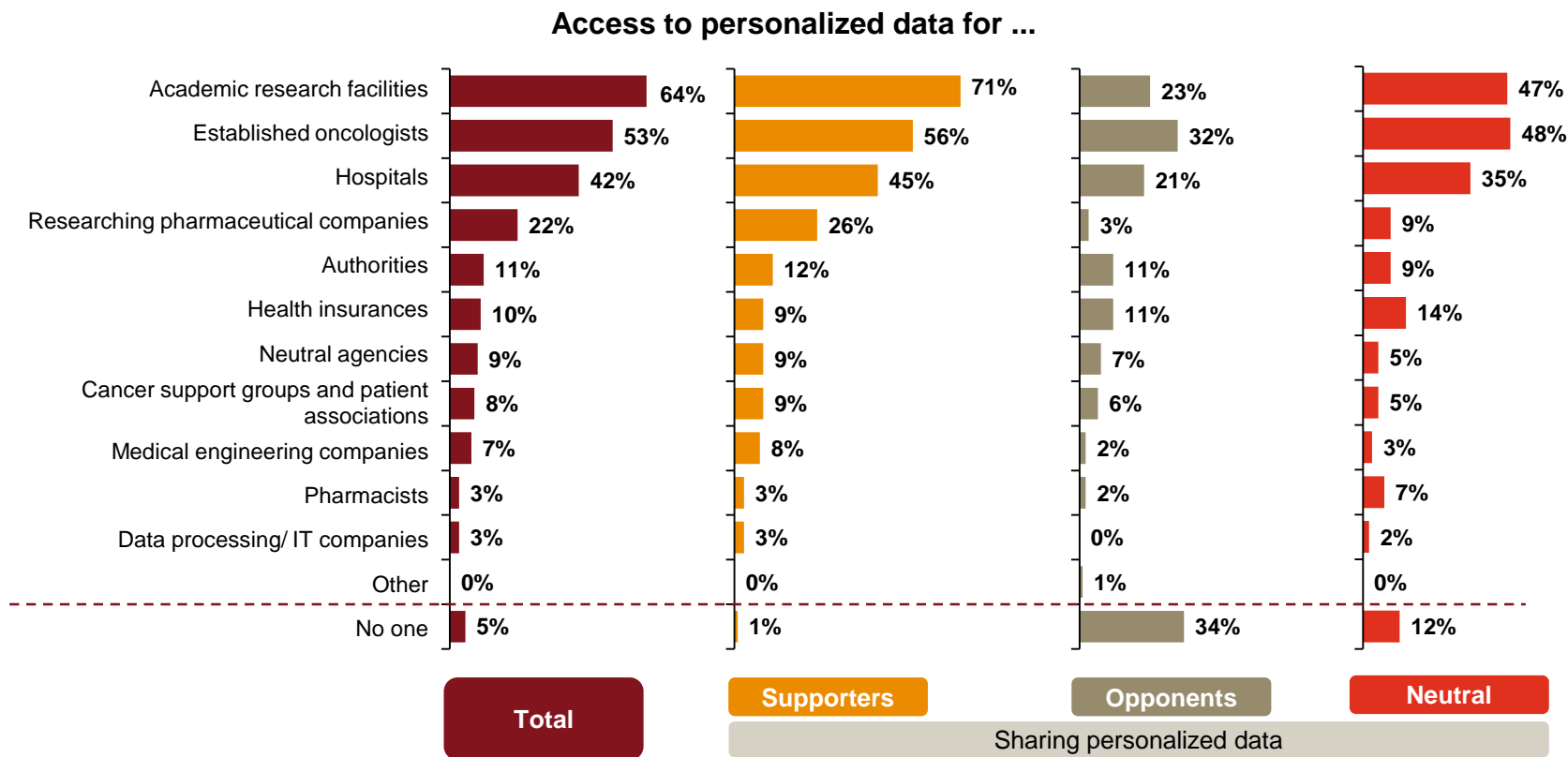
### **Access to personalized data for ...**



Question A4.3: From your point of view, who should get the most access to personalized data - if necessary, as anonymized data?  
Base: all respondents, N = 1,002 (multiple answers)

# Opponents of data dissemination for cancer research are more skeptical of research-based pharmaceutical companies

## Who should get personalized data?



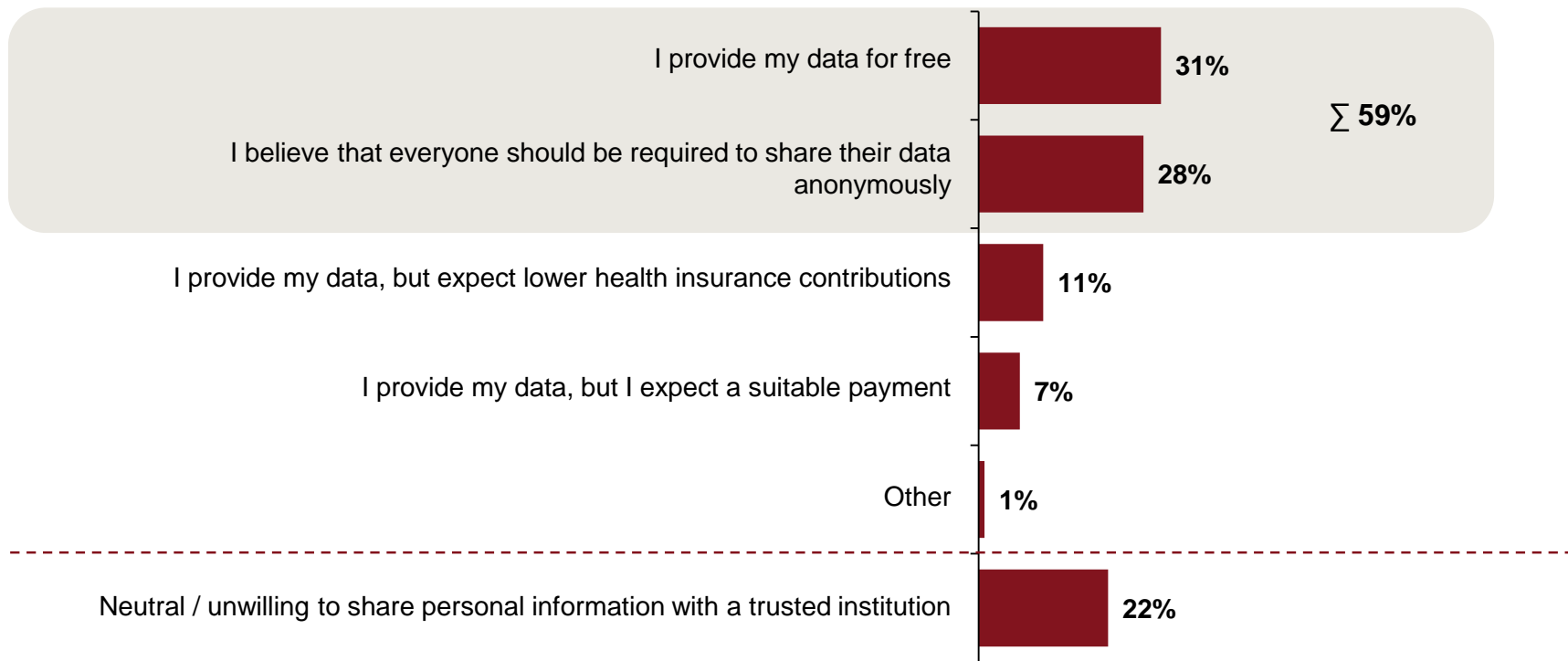
Question A4.3: From your point of view, who should get the most access to personalized data - if necessary, as anonymized data?

Base: all respondents, N = 1,002 (multiple answers)

# The majority of Germans advocate data sharing for research and better treatment of cancer

## Unconditional data transfer?

### Expectations where data is transferred



Question A4.4: Which of the following statements regarding the disclosure of your personal data for research / better treatment of cancer is most likely to apply to you?  
Base: All respondents, N = 1,002 (single response / own calculation)



# ***Under-35s are less likely to provide their data for free***

## **Consideration in return for the data transfer?**

### **Expectations where data is transferred**

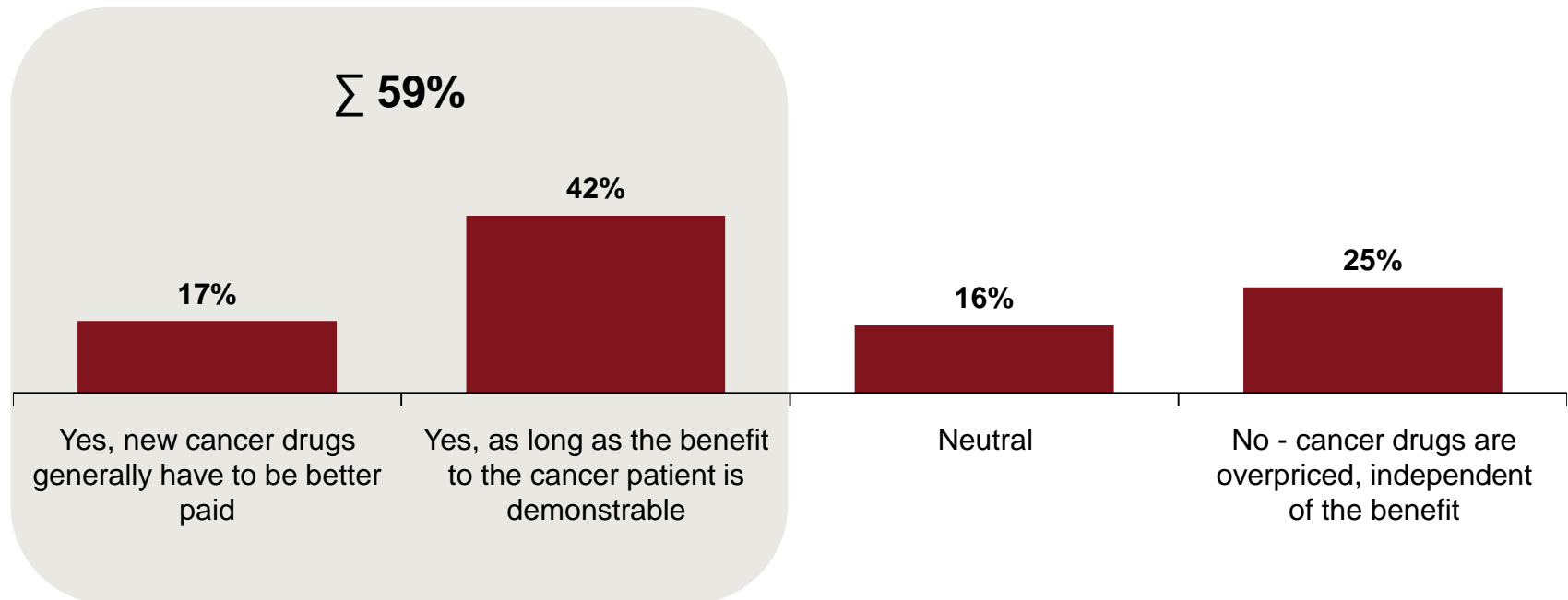
<b>Base</b>	<b>Age</b>						
	<b>Total</b>	<b>18-24 years</b>	<b>25-34 years</b>	<b>35-44 years</b>	<b>45-54 years</b>	<b>55-64 years</b>	<b>65+ years</b>
	<b>1002</b>	<b>105</b>	<b>130</b>	<b>156</b>	<b>195</b>	<b>167</b>	<b>249</b>
I provide my data for free.	31%	27%	23%	30%	32%	35%	33%
I believe that everyone should be required to share their data anonymously.	28%	24%	28%	29%	28%	29%	29%
I provide my data, but expect lower health insurance contributions.	11%	16%	13%	13%	9%	7%	10%
I provide my data, but I expect a suitable payment.	7%	5%	9%	6%	10%	7%	6%
Other	1%	1%	1%	1%	—	1%	1%
Neutral / unwilling to share personal information with a trusted institution	22%	27%	26%	21%	21%	21%	21%

Question A4.4: Which of the following statements regarding the disclosure of your personal data for research / better treatment of cancer is most likely to apply to you?  
 Base: All respondents, N = 1,002 (single response / own calculation)

# ***Six out of ten Germans find higher prices justified for modern cancer treatment, especially if there are proven benefits***

## **Higher rates for cancer therapy?**

Higher prices for modern cancer treatment are justified



Question A5: Do you find elevated prices (for example, annual costs of more than € 50,000 per cancer patient) justified for modern cancer treatment with appropriate medication?  
By comparison, the average expenditure per insured person (whether healthy or sick) is around € 4,000 per year.  
Base: all respondents, N = 1,002 (single response)

# ***Consent to higher costs for modern cancer therapy less pronounced in younger Germans than in older Germans***

## **Higher prices for cancer therapy?**

**Higher prices for modern cancer therapy are justified**

	Age						
	Total	18-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
<b>Base</b>	<b>1.002</b>	<b>105</b>	<b>130</b>	<b>156</b>	<b>195</b>	<b>167</b>	<b>249</b>
Yes, new cancer drugs generally have to be better paid	17%	14%	26%	20%	18%	13%	12%
Yes, as long as the benefit to the cancer patient is demonstrable	42%	35%	36%	36%	38%	41%	55%
Yes (total)	59%	49%	62%	56%	56%	54%	67%
Neutral	16%	23%	13%	21%	13%	20%	12%
No - cancer drugs are overpriced, regardless of the benefits	25%	28%	25%	23%	31%	26%	21%

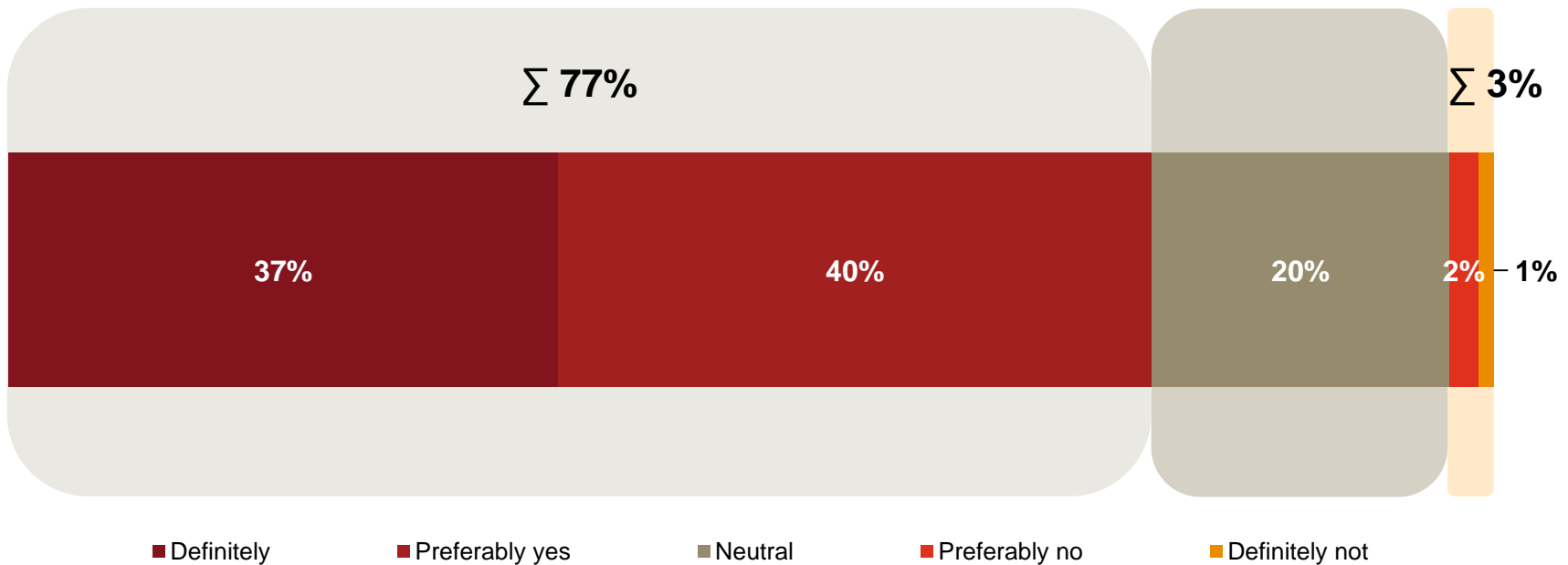
*Question A5: Do you find elevated prices (for example, annual costs of more than € 50,000 per cancer patient) justified for modern cancer treatment with appropriate medication? By comparison, the average expenditure per insured person (whether healthy or sick) is around € 4,000 per year.*

*Base: all respondents, N = 1,002 (single response)*

# Three quarters of German citizens support increased establishment of cancer centers of excellence

## How important are centers of gravity?

Establishing centers of specialization in the field of cancer medicine

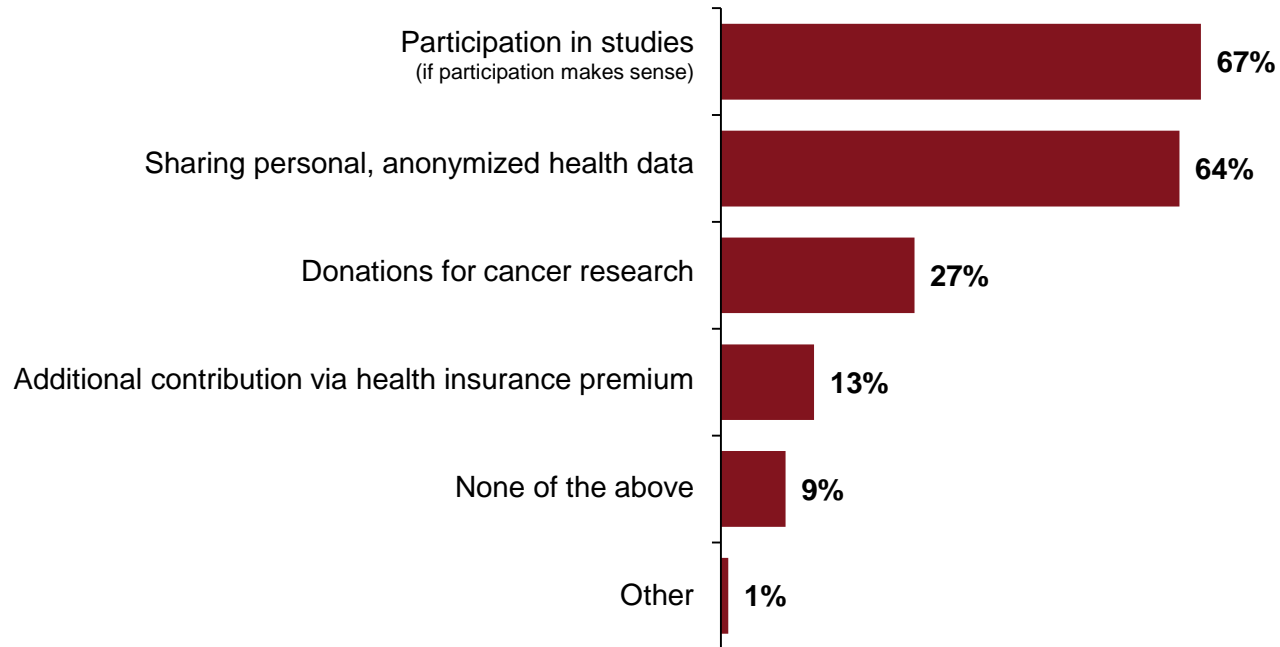


Question A6.1: Do you think that in the area of cancer medicine more focal centers (for example, breast cancer centers, leukemia centers) should be set up? Base: all respondents, N = 1,002 (single response)

# ***Two thirds of Germans would support cancer research by participating in the study or providing data***

## **Support for cancer research?**

### **Personal contribution to supporting cancer research**



Question A7: Would you be willing to personally support cancer research / medicine as listed below?  
Base: all respondents, N = 1,002 (multiple answers)

# ***The willingness to support cancer research through donations or higher health insurance contributions is higher among younger people***

## **Support for cancer research?**

### **Personal contribution to supporting cancer research**

<b>Base</b>	<b>Age</b>						
	<b>Total</b>	<b>18-24 years</b>	<b>25-34 years</b>	<b>35-44 years</b>	<b>45-54 years</b>	<b>55-64 years</b>	<b>65+ years</b>
	<b>1002</b>	<b>105</b>	<b>130</b>	<b>156</b>	<b>195</b>	<b>167</b>	<b>249</b>
<b>Participation in studies</b> (if participation makes sense)	<b>60%</b>	77%	67%	71%	65%	64%	63%
<b>Sharing personal, anonymized health data</b>	<b>58%</b>	68%	52%	63%	62%	63%	71%
<b>Donations for cancer research</b>	<b>20%</b>	35%	35%	31%	28%	20%	19%
<b>Additional contribution via health insurance</b>	<b>7%</b>	18%	26%	13%	14%	7%	9%
<b>None of the above</b>	<b>9%</b>	5%	8%	8%	11%	11%	10%
<b>Other</b>	<b>1%</b>	1%	1%	1%	–	–	1%

Question A7: Would you be willing to personally support cancer research / medicine as listed below?

Base: all respondents, N = 1,002 (multiple answers)

## ***About the study***

# ***Background and methodology***

## **Background**

The report presents the results of an online population survey on "Personalized Cancer Medicine", which was commissioned by PricewaterhouseCoopers GmbH WPG

## **Methodology**

- Survey methodology: Online Panel Survey
- Target group: Germans from the age of 18, population representative by age and gender
- Sample size: N = 1,002
- Survey period: December 2017
- Results are rounded to whole numbers



# Statistics

Age	
18 to 24 years	10%
25 to 34 years	13%
35 to 44 years	16%
45 to 54 years	19%
55 to 64 years	17%
65 years and older	25%

Marital status	
Single	26%
Married	56%
Divorced	12%
Widowed	4%
Other (separated)	1%
Not stated	1%

Household net monthly income	
Less than €1,000	9%
€1,000 to less than €2,000	25%
€2,000 to less than €3,000	28%
€3,000 to less than €4,000	15%
€4,000 or more	12%
Not stated	11%

Sex	
Male	49%
Female	51%

Education	
No graduation	13%
Middle school graduation	34%
University entrance exam	20%
University	29%
Doctorate	2%
Other	1%
Not stated	1%

Professional groups	
Employee	47%
Self-employed	7%
Public-service official	3%
Pupil or student	6%
Job-seeker	3%
Not in employment (e.g., housewife, pensioner)	34%
Other	0%
Not stated	0%

Federal State	
Baden-Wuerttemberg	12%
Bavaria	12%
Berlin	12%
Brandenburg	5%
Bremen	1%
Hamburg	3%
Hesse	7%
Mecklenburg-Western Pomerania	3%
Lower Saxony	7%
North Rhine-Westphalia	14%
Rhineland-Palatinate	4%
Saarland	1%
Saxony	9%
Saxony-Anhalt	4%
Schleswig-Holstein	3%
Thuringia	3%

Residential area	
City center	15%
City	45%
Suburb	19%
Countryside	21%

Base: all respondents, N = 1,002

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## ***Contact***

**Julia Wollschläger**  
PwC Communications

Moskauer Strasse 19  
40227 Düsseldorf  
Tel.: +49 211-9815095  
Mobile: +49 160-96987497  
E-mail: [julia.wollschlaeger@pwc.com](mailto:julia.wollschlaeger@pwc.com)

**Annabelle Kliesing**  
Senior PR Lead, PwC Strategy&

Bernhard-Wicki-Strasse 8  
80636 Munich  
Tel.: +49 89-54525613  
Mobile: +49 171-1686382  
E-mail: [annabelle.kliesing@strategyand.de.pwc.com](mailto:annabelle.kliesing@strategyand.de.pwc.com)

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