

# U.S. Public Opinion on the Use of Gene Editing

**Cary Funk**

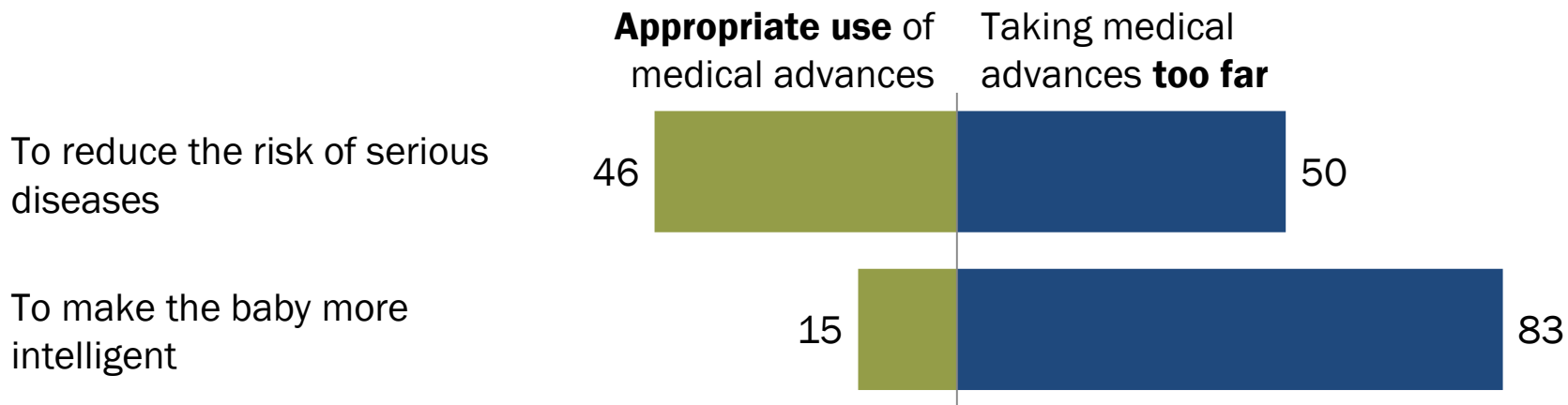
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# Changing a baby's genetic characteristics to reduce disease seen as more appropriate than to make doing so to increase intelligence

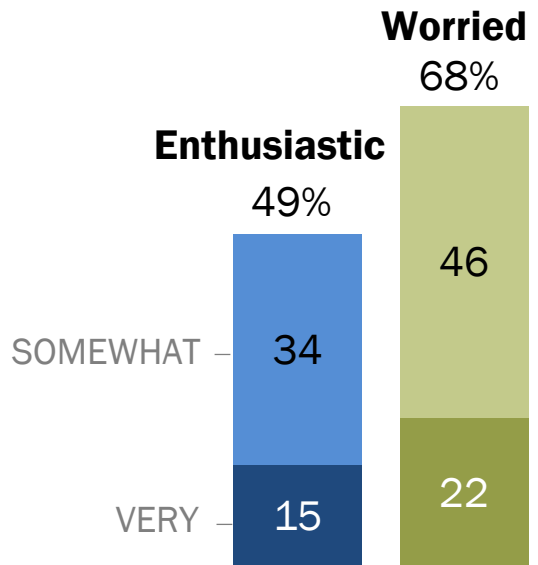
Changing a baby's genetic characteristics for each purpose is an appropriate use of medical advances/takes medical advances too far



Pew Research Center survey of U.S. adults Aug. 15-25, 2014

# More worry than enthusiasm about the idea of gene editing to 'enhance' a baby's health

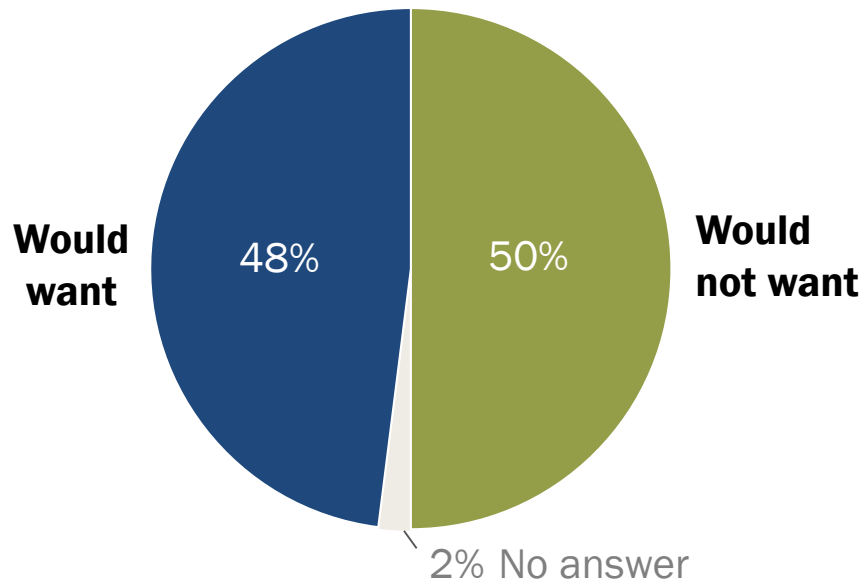
The possibility of gene editing to give healthy babies a much reduced risk of serious diseases and conditions makes them...



Pew Research Center survey of U.S. adults March 2-28, 2016

# Public closely divided over whether they would want gene editing to reduce their baby's risk of disease

Gene editing to give healthy babies a much reduced risk of serious diseases and conditions is something they would/would not want for their baby



"Definitely" would/would not want and "probably" would/would not want responses combined.

Pew Research Center survey of U.S. adults March 2-28, 2016

# Americans expect more negative than positive effects from use of gene editing to reduce disease risk

Each of the following is likely to happen as a result of gene editing to give healthy babies a much reduced risk of serious diseases and conditions

## POSSIBLE NEGATIVE OUTCOMES

This option will be used before we fully understand the effects

73%

Inequality will increase; will only be available for wealthy

70

People who have this will feel superior to those who do not

53

## POSSIBLE POSITIVE OUTCOMES

People who have this will feel more confident about themselves

52

Widespread use will lead to new innovation and problem-solving

45

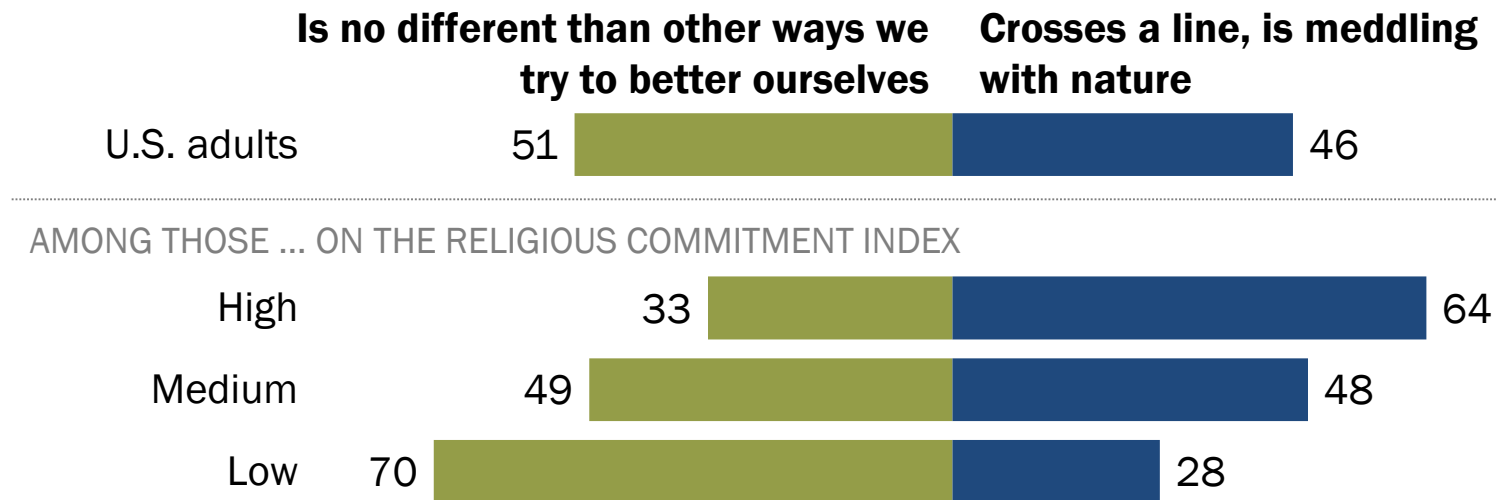
People who have had this will be more productive at their jobs

32

Pew Research Center survey of U.S. adults March 2-28, 2016

# Most highly religious Americans say gene editing of babies would be meddling with nature

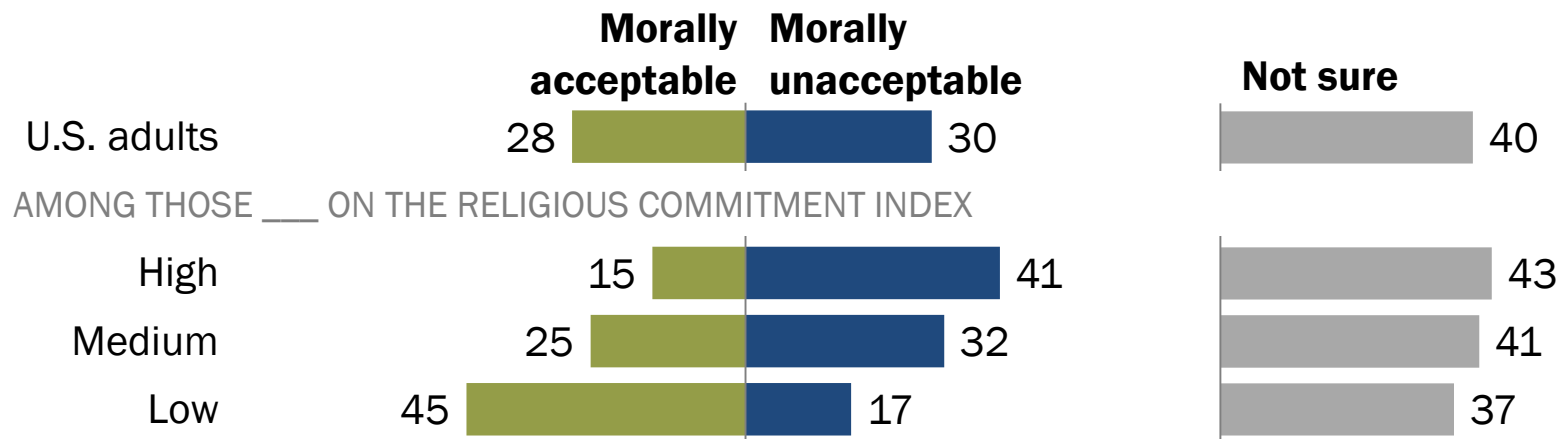
Gene editing to give healthy babies a much reduced risk of serious diseases and conditions...



Pew Research Center survey of U.S. adults March 2-28, 2016

# Wide differences by religious commitment on whether gene editing is morally acceptable

Gene editing to give healthy babies a much reduced risk of serious diseases and conditions...



Pew Research Center survey of U.S. adults March 2-28, 2016

# Religious beliefs are prominent among reasons 30% of adults say gene editing is morally unacceptable

Explanations of why respondents said gene editing to give healthy babies a much reduced risk of serious diseases and conditions would be morally unacceptable

## MOST COMMON CATEGORIES

|                                                        |     |
|--------------------------------------------------------|-----|
| References to changing God's plan                      | 34% |
| Disrupting nature, crossing a line we should not cross | 26% |
| Could be controlled or used for bad motives            | 9%  |
| Could have unintended consequences                     | 8%  |
| Unnecessary, especially for healthy people             | 5%  |
| All other responses                                    | 28% |
| Don't know/not sure                                    | 27% |

*"God is the Creator. Messing with the DNA is crossing the line."*

*"It's messing with nature. Nothing good can come from that."*

*"Adjusting the balance in our genes could have profound and unpredictable outcomes in the way our personalities and talents develop."*

Pew Research Center survey of U.S. adults March 2-28, 2016

# Focus groups: thoughts on why gene editing would be unacceptable

*It seems like if you're fooling around with gene editing and changing DNA, you are fundamentally changing something about the way a human being is originally created.*

- 62-YEAR-OLD WHITE, EVANGELICAL CHRISTIAN MAN IN ATLANTA, GA

*At what point do we only have three different types of people as opposed to having all this great diversity that we have? That's what makes us us.*

- 40-YEAR-OLD HISPANIC MAN IN PHOENIX, AZ

*I mean some religious people may think this is playing God. You know, if you are altering DNA, basically. [Life] forms. Literally.*

- 59-YEAR-OLD WHITE WOMAN IN ATLANTA, GA

# Among the 28% of U.S. adults who say gene editing is morally acceptable, many see this as on continuum of human betterment

Explanations of why respondents said gene editing to give healthy babies a much reduced risk of serious diseases and conditions would be morally acceptable

## MOST COMMON CATEGORIES

|                                                               |     |
|---------------------------------------------------------------|-----|
| Humans are always improving and should be bettering ourselves | 32% |
| Positive effect on people and society                         | 21% |
| Similar to current enhancements                               | 8%  |
| God gave us the means and brains to innovate                  | 5%  |
| Should be free choice, up to individual                       | 4%  |
| All other responses                                           | 52% |
| Don't know/not sure                                           | 11% |

*“Medical advances are a moral imperative for the well-being of individuals and society.”*

*“If used properly, it would make a huge difference to the quality of life for some people.”*

*“God gave us brains and tools. He expects us to use them to better people’s quality of life.”*

Pew Research Center survey of U.S. adults March 2-28, 2016

## Focus groups: thoughts on why gene editing would be acceptable

*We're doing organ transplants, we're doing bone marrow transplants; this is just something we do as people and this is the next step.*

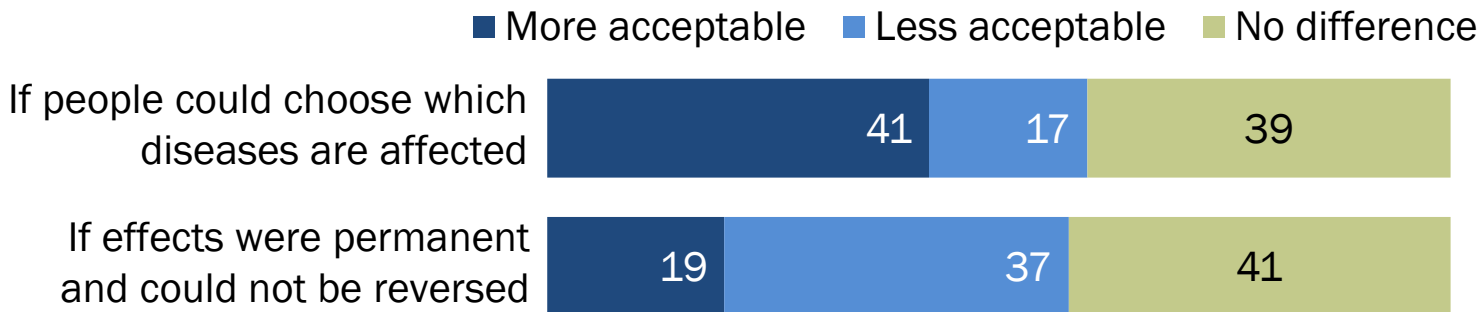
- 32-YEAR-OLD WHITE MAN IN DEDHAM, MA

*Just because you have faith in God, does it make you not go have your gallbladder [or] your tonsils taken out? I mean, people do things every day to lengthen their life and be healthier.*

- 50-YEAR-OLD HISPANIC EVANGELICAL PROTESTANT WOMAN IN PHOENIX, AZ

# The ability to control gene editing's effects is more acceptable

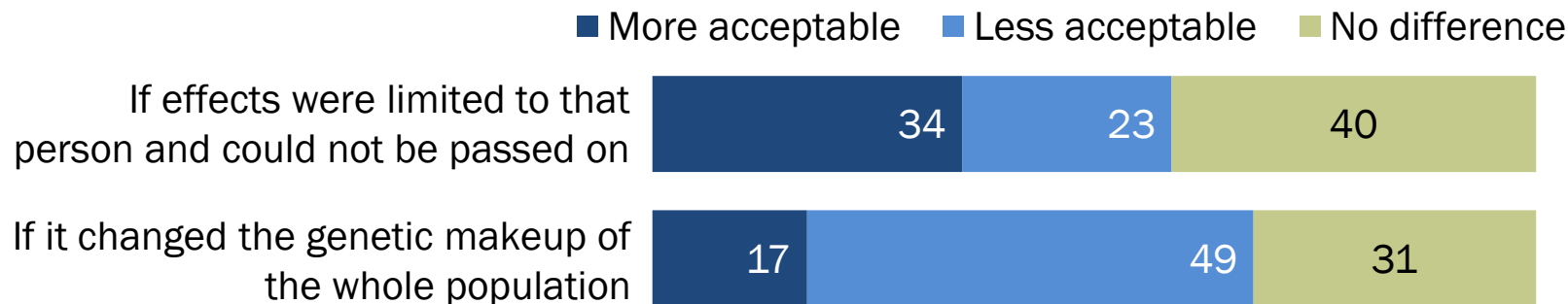
Gene editing to give healthy babies a much reduced risk of serious diseases and conditions would be more acceptable, less acceptable or make no difference ...



Pew Research Center survey of U.S. adults March 2-28, 2016

# The U.S. public is especially concerned about germline editing

Gene editing to give healthy babies a much reduced risk of serious diseases and conditions would be more acceptable, less acceptable or make no difference ...



Pew Research Center survey of U.S. adults March 2-28, 2016

# Embryonic testing would make gene editing less acceptable to many Americans

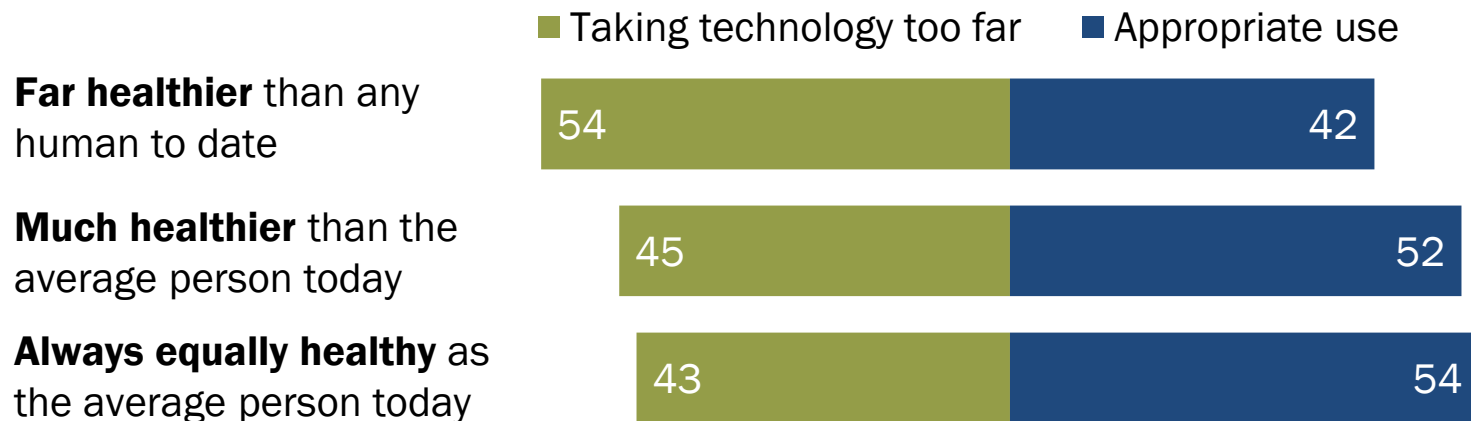
Gene editing to give healthy babies a much reduced risk of serious diseases and conditions would be more acceptable, less acceptable or make no difference ...



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# More extreme health effects of gene editing are seen as taking technology too far

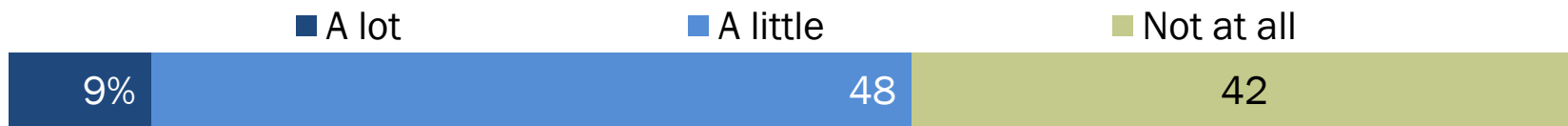
Gene editing to give healthy babies a much reduced risk of serious diseases and conditions would be appropriate/taking technology too far if it results in people ...



Pew Research Center survey of U.S. adults March 2-28, 2016

# Those familiar with gene editing are more inclined to want it for their children

Heard or read \_\_\_\_ about gene editing before taking the survey



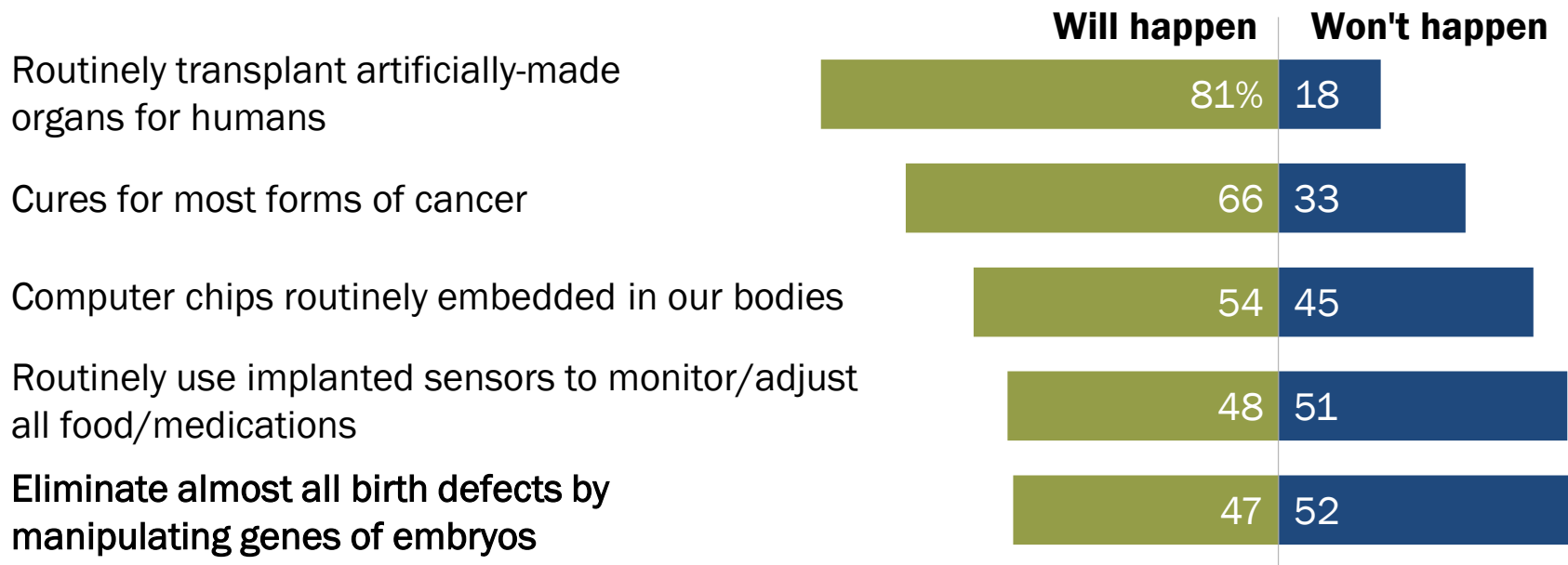
Would want gene editing giving their baby a much reduced risk of serious diseases



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# Nearly half or more expect these changes will come to pass within 50 years

Each of the following \_\_\_ in the next 50 years



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