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## People with HIV at the End of Life and their Next-of-Kin/Loved Ones Are Willing to Participate in Interventional HIV Cure-Related Research

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### Authors' Contributions

SON drafted the manuscript, and supported data management. HP and SE supported data management and reviewed the manuscript. BS led data analysis and reviewed the manuscript for accuracy and intellectual contents. SCG and CD conducted participant interviews and reviewed the manuscript for intellectual contents. SH, PKR, TJV, SJL, DL, AKA and CTC reviewed the manuscript for intellectual contents. DMS and SG provided Last Gift study leadership and reviewed the manuscript for intellectual contents. AK and JT facilitated community review of the instruments and reviewed the manuscript for intellectual contents. KD designed the study, supervised research staff, and extensively reviewed the manuscript for intellectual contents. All co-authors have approved the final version of this manuscript.

We declare no conflict of interest.

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## Abstract

**Introduction:** The Last Gift study at the University of California San Diego, United States enrolls terminally ill people with HIV (PWH) in HIV cure research.

**Methods:** From 2017 – 2022, we conducted surveys with Last Gift participants and their next-of-kin/loved ones to evaluate willingness to participate in different types of HIV cure research at the end of life. We analyzed willingness data descriptively.

**Results:** We surveyed 17 Last Gift participants and 17 next-of-kin/loved ones. More than half of Last Gift participants (n=10; 58.8%) expressed willingness to participate in studies involving totally new treatments or approaches (“first-in-human” studies), a combination of different approaches, the use of unique antibodies, proteins or molecules, or therapeutic vaccines. Under one-quarter of Last Gift participants (n=4; 23.5%) expressed willingness to participate in research involving interventions that may shorten their life expectancy to benefit medical research. Most Last Gift participants and their next-of-kin/loved ones also expressed high acceptance for various types of donations and biopsies at the end of life (e.g., hair donations and skin, lymph node or gut biopsies).

**Discussion:** Knowing whether people would be willing to participate in different types of EOL HIV cure research can help inform the design of future innovative studies. As a research community, we have a duty to design studies with adequate safeguards to preserve the public trust in research and honor PWH’s important gift to humanity.

## Keywords

HIV cure research; end of life; willingness to participate; Last Gift; rapid research autopsy; altruism; socio-behavioral research

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## Introduction

The goal of developing effective HIV cure strategies has prompted several innovative studies in recent years (1,2). While current antiretroviral treatment (ART) can achieve viral suppression below the limit of detection with clinical assays, it does not purge latent reservoirs, the main barrier to curing HIV (3). Novel approaches are needed to suppress HIV replication in the absence of ART, or to eliminate HIV from the body.

Prior socio-behavioral studies revealed that a myriad of factors may influence willingness to participate in HIV cure research (4–15). Participation in HIV cure research is primarily motivated by altruism, due to the high risk often associated with these studies and limited prospects of direct benefits (16–21). However, there are barriers that may deter people with HIV (PWH) from participating in HIV cure research, particularly at the end of life (EOL) (22). These factors include risky interventions that threaten quality of life, burdensome procedures, and analytical treatment interruptions (ATIs) (22). Further, the acceptance of next-of-kin (NOK)/loved ones may ultimately affect the types of procedures PWH at the EOL may be willing to undergo. Thus, understanding the acceptability of select HIV cure study designs to PWH at the EOL and their NOK/loved ones is critical to inform the design of such innovative studies.

The Last Gift is an observational study enrolling PWH at the EOL at the University of California San Diego (UCSD) (23,24). Specifically, the study enrolls 1) terminally ill PWH (i.e., with a prognosis of 6 months or less, and a non-AIDS defining illness) and 2) PWH who have a five-year mortality of greater than 50% but no current terminal illness, all of whom provide informed consent to donate tissues at the time of death (25–27). The second Last Gift participant group is referred to as ‘On Deck,’ as named by the UCSD Antiviral Research Center (AVRC) Community Advisory Board (CAB) (28). To date, the Last Gift study has enrolled approximately 30 participants in observational HIV cure research. Most Last Gift participants have a rich history of prior clinical HIV research participation. Enrolling PWH near the EOL permits close follow-up during a limited period to collect biospecimens (e.g., blood, urine, genital secretions) along with clinical and socio-behavioral research data (25). Engaging this population enables researchers to compare HIV reservoirs before and after death across multiple body compartments while considering ART and other interventions (24,25,29). PWH at the EOL may be willing to accept higher risks and some may elect to interrupt ART at the EOL (25,29). Further, long-term risks are less relevant in this population. The Last Gift also values the involvement of NOK/loved ones (30,31). The research team uses a broad definition of NOK/loved ones, recognizing that familial arrangements may vary among PWH (32).

The Last Gift serves as the research paradigm by which scientists may eventually start testing interventions in PWH at the EOL (33). Our interdisciplinary team evaluated the willingness of PWH near the EOL and their NOK/loved ones to participate in different types of HIV cure research. The objective of this inquiry is to inform the outreach, design, and conduct of future interventional HIV cure research at the EOL.

## Methods

### Study Participants and Setting

Since 2017, the Last Gift study focused on studying HIV dynamics in tissues of PWH at the EOL (24). We also conducted surveys with Last Gift participants to evaluate their willingness to participate in different types of EOL HIV cure research. Last Gift participants are given the option to refer a NOK/loved one.

Along with the AVRC CAB and the HIV + Aging Research Project Palm Springs (HARP-PS) Stakeholders Advisory Board, we developed surveys that were pilot-tested and iteratively modified in preparation for the socio-behavioral component of the study. The Last Gift/On Deck participant survey was developed first, and then NOK/loved ones survey was developed shortly thereafter.

### **Data Collection**

We conducted surveys with Last Gift participants and their NOK/loved ones from 2017 – 2022. Given the nature of the Last Gift, accrual takes time and is labor-intensive. The Last Gift team recruits approximately five participants per year. Last Gift participants are given the option to be surveyed in one or over multiple visits given the limitations posed by conducting research with PWH at the EOL (34). Upon completion of the surveys, Last Gift participants and NOK/loved ones received \$20 USD in compensation.

We report here data related to willingness and acceptability of different types of HIV cure research at the EOL from Last Gift participants and their NOK/loved ones.

### **Willingness to Participate in Different Types of HIV Cure Research at the EOL**

Last Gift participants were asked to indicate if they would be willing to participate in different types of HIV cure research within the next six months (Yes/Agreement or No/Disagreement). The types of HIV cure research included studies involving new treatments or approaches (“first-in-human” studies), different types of HIV cure studies (e.g., antibodies, therapeutic vaccines, gene therapies, latency-reversing agents), and studies involving ATIs, among others.

### **Acceptability of HIV Cure Research Interventions and Procedures from the Perspectives of NOK/Loved Ones**

NOK/loved ones indicated their hypothetical acceptance (Yes/Agreement or No/Disagreement) of various items related to HIV cure research interventions and study procedures. These included, but were not limited to, collection of biological fluids other than blood, different phases of investigational studies (e.g., Phase I, II, III), and experimental interventions that would have moderate to severe side effects.

### **Willingness to Donate and Acceptability of Tissue Biopsies at the EOL**

Last Gift participants and NOK/loved ones indicated their hypothetical acceptance (Yes/Agreement or No/Disagreement) of various tissue biopsy procedures (ante mortem) at the EOL. These included hair donation, skin biopsies, lymph node biopsies, gut/rectal biopsies, genital secretions, and lumbar punctures.

### **Data Management and Analyses**

We used Qualtrics<sup>XM</sup> to manage the survey data. We conducted descriptive analyses to summarize the results. For each question, we reported the number of analyzable responses. We reported the number of Last Gift participants and NOK/loved ones who reported ‘Yes/Agreement’ to each question. The small sample size precluded more complex bivariate and multivariate analyses.

## Ethical Considerations

The UCSD Institutional Review Board (IRB) approved the Last Gift study with the socio-behavioral research component (Project #160563). All participants provided written informed consent. Additionally, all Last Gift participants provided written informed consent for pre- and post-mortem sampling prior to being surveyed.

## Results

### Demographic Characteristics

From 2017 – 2022, we surveyed 17 Last Gift participants and 17 NOK/loved ones about their willingness to participate in HIV cure research at the EOL.

**Last Gift and On Deck participants:** There were 14 Last Gift participants and 3 On Deck participants. The mean age of Last Gift participants was 65.4 years and of On Deck participants, 71.6 years. There were 2 (14.3%) Last Gift and 1 (33.3%) On Deck females and 12 (85.7%) Last Gift and 2 (66.6%) On Deck males. Most Last Gift and On Deck participants identified as White/Caucasian (n=12; 85.7% and n=3; 100% respectively), while 1 Last Gift participant identified as Black/African American (7.1%), and 1 as multi-racial (7.1%). The majority of Last Gift and On Deck participants (n=13; 92.9% and 3; 100%) were non-Hispanic/Latinx ethnicity, and over half (n=9, 52.9%) reported having at least an undergraduate degree or equivalent. Last Gift and On Deck participants' terminal/chronic illness(es) included cancers (e.g., brain, pancreatic, oral, rectal, lung, esophageal, skin), cardiovascular disease, neurodegenerative disease (e.g., amyotrophic lateral sclerosis), and other condition(s). Most Last Gift and On Deck participants (n=10; 58.8%) reported a disability near the EOL (Table 1).

**NOK/loved ones:** There were 17 NOK/loved ones. Of those 17, 16 were affiliated with Last Gift participants and 1 with an On Deck participant. The mean age of NOK/loved ones participants was 56.5 years. Further, 7/17 NOK/loved ones (41.2%) identified as female. There were 5 partners/spouses, 4 siblings, 3 friends, 2 children, 1 parent, 1 grandparent, and 1 nephew who served as NOK/loved ones (Table 2).

### Willingness to Participate in Different Types of HIV Cure Research at the EOL

A large portion of Last Gift and On Deck participants expressed willingness to participate in leukaphereses or aphereses (n=9; 64.3% and n=3; 100%, respectively) and focus group discussions (n=8; 57.1% and n=3; 100%, respectively). More than half of the participants (Last Gift: n=8; 57.1% and On Deck: n=2; 66.7%) expressed willingness to participate in studies involving totally new treatments or approaches (“first-in-human” studies), a combination of different approaches, or the use of unique antibodies, proteins, or molecules. Half (n=7) of Last Gift participants reported willingness to participate in studies of therapeutic vaccines in contrast to 100% (n=3) of On Deck participants. Additionally, 58.8% (n=10) of participants expressed willingness to participate in late-phase studies related to safety and efficacy (phase II or III studies), studies that involved transplantation of their own stem cells, and studies involving the modification of genes in their immune cells. Less than half of the participants expressed willingness to participate in studies involving

ATIs (n=7; 41.2%) with no On Deck participant expressing such willingness. Further, less than one-third of Last Gift participants (n=3; 21.4%) expressed willingness to participate in studies involving a transplantation of someone else's stem cells, though 66.7% (n=2) of On Deck participants expressed willingness to do so. Only 35.7% (n=3) of Last Gift participants reported willingness to participate in studies involving latency reversing agents whereas no On Deck participant indicated such willingness. Just under one-quarter of participants (n=4; 23.5%) expressed willingness to participate in research involving interventions that may shorten their life expectancy (Figure 1).

### **Acceptability of HIV Cure Research Interventions and Procedures from the Perspectives of NOK/Loved Ones**

Most NOK/loved ones expressed acceptance of focus group discussions (n=16; 94.1%), collection of biological fluids other than blood (e.g., urine, saliva, mucus, etc.) (n=13; 76.5%), and Phase II or III studies (n=10; 58.8%). Less than half of NOK/loved ones expressed acceptability of testing experimental interventions with moderate side effects (n=7; 41.2%), and only 3 (17.6%) perceived testing experimental interventions with severe side effects as acceptable (Figure 2).

### **Willingness to Donate and Acceptability of Tissue Biopsies at the EOL**

Concerning tissue biopsies ante mortem, most of both Last Gift and On Deck participants and NOK/loved ones expressed acceptability of hair donations (n=11; 78.6%; n=3; 100% and n=17; 100%, respectively). Similarly, there was high acceptability among both Last Gift and On Deck participants and NOK/loved ones for skin biopsies (n=10; 71.4%; n=3; 100% and n=17; 100%, respectively), lymph node biopsies (n=8; 57.1%; n=3; 100% and n=16; 94.1%, respectively), and rectal biopsies (n=8; 57.1%; n=3; 100% and n=16; 94.1%, respectively). Half of the Last Gift participants and two-thirds of On Deck participants expressed acceptability of genital secretions (n=7; 50.0%; n=2; 66.7%), while all (n=17; 100%) NOK/loved ones perceived this type of donation as acceptable. Further, less than half of the Last Gift participants expressed acceptability of lumbar punctures at the EOL (n=6; 42.9%) while the majority (n=2; 66.7% and n=13; 76.5%, respectively) of On Deck participants and NOK/loved ones expressed acceptability. Gut biopsies were also perceived as acceptable by most NOK/loved ones (n=12; 70.6%) (Figure 3).

## **Discussion**

Our results conveyed that a high proportion of Last Gift participants would be willing to participate in interventional HIV cure research at the EOL. Knowing whether people would be willing to participate in different types of EOL HIV cure research can help inform the design of future studies and is essential to planning research that remains acceptable to PWH (25). Engaging PWH at EOL is valuable to HIV cure research since their perceptions of long-term risks and benefits may differ from otherwise healthy participants. Further, the timing of certain procedures (such as tissue biopsies post-mortem) can influence the capabilities of certain studies (24). Moreover, NOK/loved ones represent important stakeholders who viewed interventional EOL HIV cure research as generally acceptable, and this finding will help determine whether studies related to these approaches can go



forward (30,31). Our study augments the socio-behavioral research literature on willingness to participate in HIV cure research (4–15) by focusing on hypothetical research at the EOL. It is valuable to see how various interventions are ranked in terms of acceptability from the perspective of EOL HIV cure research participants and their NOK/loves ones.

A large proportion of Last Gift participants expressed willingness to participate in research approaches that would involve aphereses. A similar high willingness was identified in a U.S. survey of older PWH (median age: 51 years old) (5) and another survey of young adults living with HIV (14). Despite this high willingness, there are other important prevailing ethical and practical considerations, such as the physical state of PWH at the EOL (e.g., including sufficient venous access in the setting of hypovolemia or anasarca).

Although over half of the Last Gift participants expressed willingness to participate in “first-in-human” studies, or studies involving a combination of different approaches, therapeutic vaccines, and unique antibodies or molecules, the level of risk involved, and novelty of new approaches appears to be a considerable deterrent for PWH (5,15). The general acceptability of participating in HIV cure research at the EOL observed among Last Gift participants was lower than a previous hypothetical study with PWH not at the EOL (15). Further, just over half of Last Gift participants expressed willingness to participate in later-stage studies, or studies involving the transplant of the participant’s own stem cells or gene modifications. Interestingly, there appears to be less acceptance of research involving external biological agents or the modification of genes within the body, concurrent with previous socio-behavioral findings (5,7,14,35). Last Gift participants reported lowest support for the shortening of their life expectancy, contradicting prior results which showed over 60% of PWH not at the EOL would be willing to shorten their lifespan (15). However, our results corroborate previous qualitative research conveying the concerns PWH have with studies that involve a high level of invasiveness or that may result in more permanent physical harm or hastened death (29). Further, the fact that nearly a quarter of participants would consider interventions that may shorten their life is remarkable. This highlights the level of altruism (16) and value placed on pursuing an HIV cure within the community of PWH. While we can safely assume Last Gift participants are altruistic, a standardized altruism scale could help advance future studies investigating participant willingness by providing a method to assess and explore the influence of altruism on participant decision-making (16,36–38). Together, our findings emphasize the importance of respecting participants’ autonomy, rigorous informed consent with explicit discussion of both potential risks and realistic expectations of the potential impact of PWH’s contributions, and minimization of pain and discomfort at the EOL to the extent possible.

Most Last Gift participants did not express willingness to participate in research involving ATIs at the EOL (6,14). This may be due to the fear of reactivation of latent viral reservoirs, or the risk of extreme discomfort or even the possibility of transmitting HIV to sex partners while off HIV medications (14,39). To date, most Last Gift participants have elected to remain on ART in the observational Last Gift. For EOL HIV cure research to remain acceptable, it is imperative that researchers consider the willingness of PWH to interrupt treatment when testing interventions. In our prior ethical considerations, we determined PWH should not be explicitly asked to interrupt treatment in the observational Last Gift



but should elect to do so on their own (25). PWH involved in research studies should be able to consider and/or raise issues related to treatment interruption, if desired. In an empirical ethics study investigating the acceptability of interventional EOL HIV cure research, most stakeholders (including community members) perceived the use of ATIs at the EOL favorably if needed to test an experimental intervention, but this would require robust informed consent and briefing about potential risks (33).

In this study, NOK/loved ones expressed similar acceptability of focus group discussions and other biological fluid collections. Future studies may increase participation from PWH at the EOL if these consist primarily of approaches that NOK/loved ones also find acceptable. Comparable to the Last Gift participants, NOK/loved ones expressed hesitancy towards early-phase investigational studies. The novelty of different HIV cure research studies may pose considerable barriers to HIV cure research enrollment, especially within communities with a history of medical mistrust (40). The cultural and ethnic origins of research participants, and their NOK/loved ones, may play a significant role in their decision to participate in research at a time as sensitive as the EOL. Additionally, NOK/loved ones found research approaches with severe side effects as least favorable, indicating their protectiveness of Last Gift participants. This finding underscores the importance NOK/loved ones place on the safety of experimental clinical research.

We noted a high willingness of Last Gift participants and NOK/loved ones towards various types of donations and tissue biopsies at the EOL. These findings echo the altruism witnessed in the Last Gift (16,41) and similar findings regarding organ donation among PWH (42). The lowest level of acceptability among Last Gift participants was seen regarding collection of genital secretions and lumbar punctures. Although genital secretions may seem to be a less intensive collection procedure compared to lumbar punctures, the personal and physical vulnerability involved in genital secretions may present a considerable barrier. The NOK/loved ones expressed a higher acceptability than Last Gift participants for every tissue biopsy proposed. The largest numerical differences were witnessed for the following types of donations/biopsies: lymph nodes, rectal biopsies, lumbar punctures, and genital secretions. The varying levels of acceptability between Last Gift participants and NOK/loved ones possibly may suggest varying perceptions of risk, invasiveness, and discomfort.

Notably, our prior ethics research highlighted considerations for EOL HIV cure research (25). One such critical consideration would be to maintain a favorable benefit/risk profile for any intervention tested at the EOL (25). As such, we noted interventions that would be unfavorable for testing at the EOL, such as stem cell transplants in PWH who do not have a concomitant cancer (25). (33)

## Limitations

Because of the nature of EOL research, some Last Gift participants were unable to complete a survey. We observed functional attrition, a common phenomenon witnessed in EOL research (34). Some of the Last Gift participants elected not to refer a NOK/loved one. The heterogeneity in the relationships between participants and their NOK/loved ones limits the generalizability of the responses. To reduce cognitive burden at the EOL, we

used Yes/Agreement and No/Disagreement questions, and Likert scales would likely have led to more nuanced data. The small sample size prevented us from performing bivariate and multi-variate analyses, including disaggregation of data by sex and/or gender. Last Gift participant and NOK/loved ones surveys were designed separately, and as a result, there are some differences in the willingness questions asked between the two groups. Willingness to participate data are prone to social desirability bias, and findings should not be used to predict future enrollment rates (5). This is a small pilot study that reports descriptive rather than inferential results. Future research studies assessing the willingness of participants will require larger sample sizes and controls for additional factors that may contribute to response bias. Future studies may also elect to examine trends over time, given the increasing acceptability of EOL HIV cure-related research among PWH. Further, we acknowledge that PWH at the EOL represent a non-homogenous group with different perspectives warranting further examination. For instance, the distinctive differences in illness condition and severity between PWH at the EOL (with a prognosis of 6 months or less) versus those who are 'On Deck' (with a five-year mortality of greater than 50% but no current terminal illness) may contribute to unique perspectives in willingness to participate in different types of HIV cure-related research at the EOL.

Additionally, there is possible sampling bias due to the nature of this study. Since the Last Gift respondents have already provided consent to participate in the Last Gift, there is a probability of respondents expressing willingness or acceptability for some of the items inquired. Other factors that could have significant effects on the results include the type and quality of the participant's relationship with the NOK/loved one(s), the comfort level of participant with the Last Gift and/or the research team, and levels of pain/discomfort experienced at the EOL. Further, we did not integrate a standardized altruism scale in the present Last Gift. Because the Last Gift is occurring in San Diego, California, our data cannot be generalized to all PWH or other settings. Additionally, the ability to provide well-informed answers for these questions requires advanced knowledge about the different HIV cure strategies and their associated risks. Thus, the responses here are informative but willingness to participate may differ after obtaining full informed consent for discrete procedures or interventions.

## Conclusions

Performing various types of HIV cure research at the EOL will require ongoing dialogue among PWH, their NOK/loved ones, community advocates, bioethicists, regulators, and biomedical scientists, together with multi-disciplinary approaches to ensure such research can remain ethical and acceptable. As a research community, we have a duty to design studies with adequate safeguards to preserve the public trust in research and honor PWH's important gift to benefit humanity.

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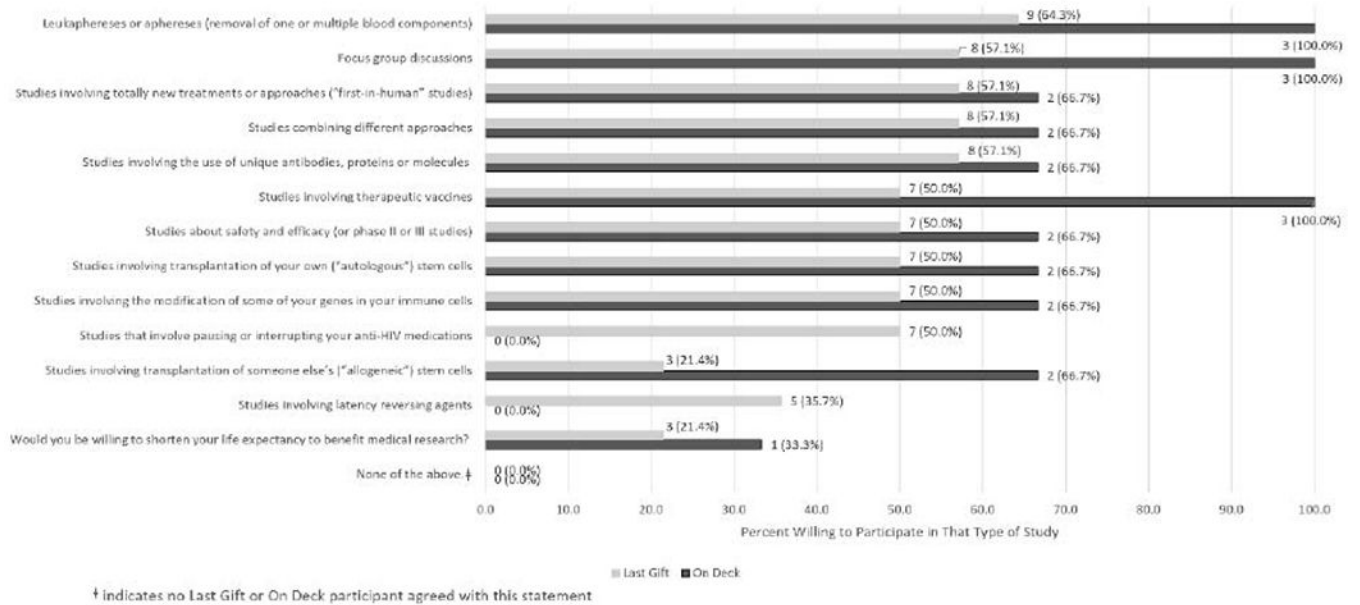
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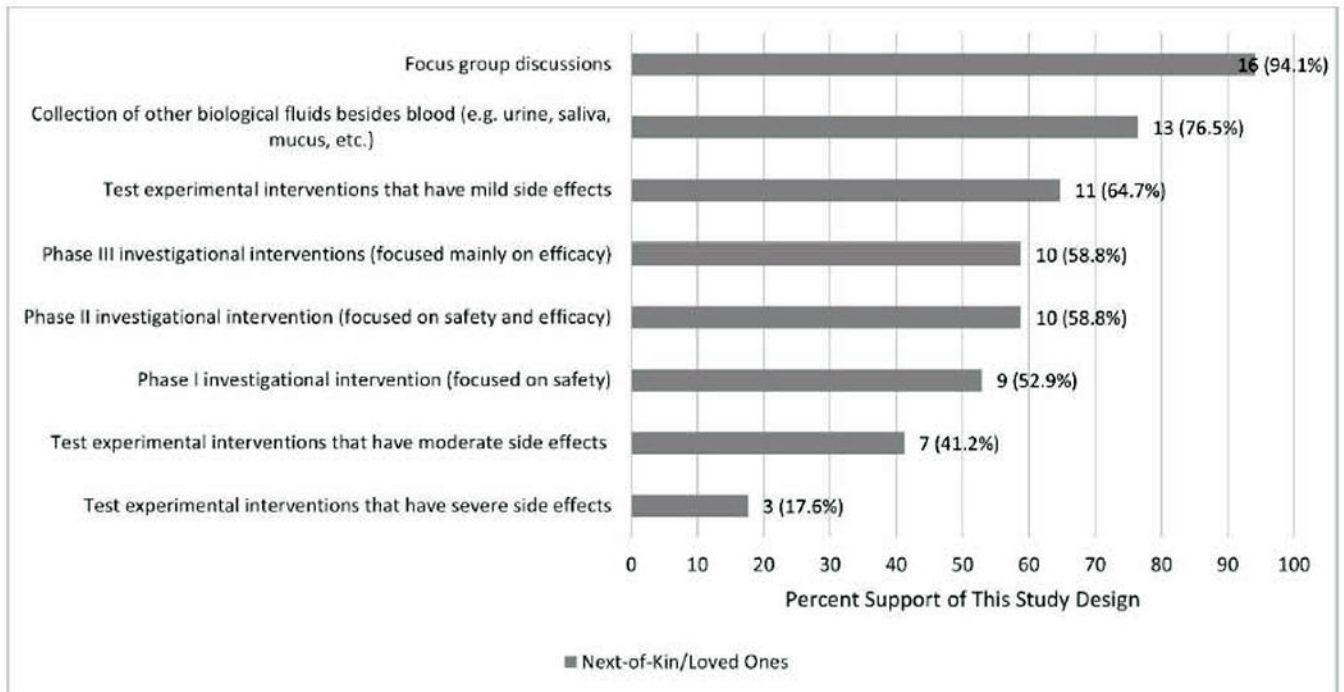
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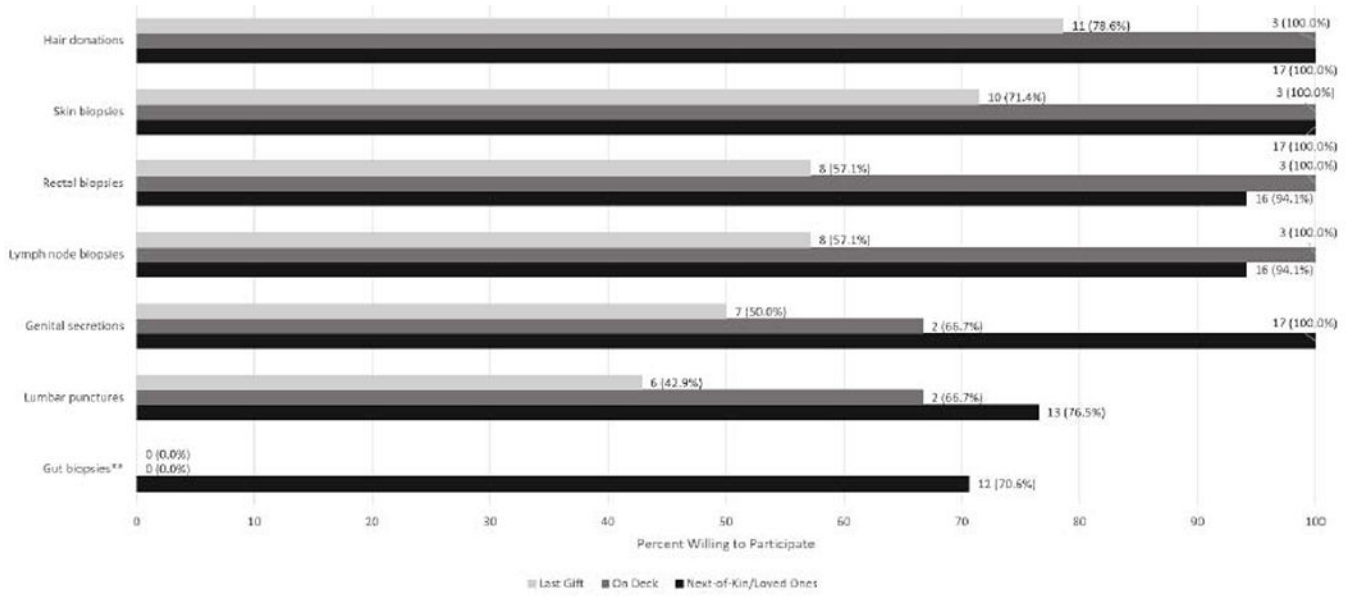
**Figure 1:**  
Willingness of Last Gift/On Deck Participants to Participate in Different Types of HIV-Cure Research at the EOL (San Diego, CA, 2017 – 2022)





**Figure 2:**  
 Acceptability of HIV Cure Research interventions and Study Procedures from the Perspectives of Next-of-Kin/Loved Ones (San Diego, CA, 2017 – 2022)





\*\* Question was only asked of Next-of-Kin/Loved Ones

**Figure 3:**  
Willingness to Donate and Acceptability of Tissue Biopsies at the End of Life among Last Gift/On Deck Participants and Next-of-Kin/Loved Ones (San Diego, CA, 2017 – 2022)

**Table 1:**

Demographic Characteristics of Last Gift and On Deck Participants (San Diego, CA, 2017 – 2022)

	Last Gift/On Deck Participants	Last Gift Participants	On Deck Participants
	N=17	N=14	N=3
<b>Age in years, mean (std. dev.)</b>	66.6 (9.9)	65.4 (10.7)	71.6 (2.5)
<b>Assigned male sex at birth</b>	14 (82.4)	12 (85.7)	2 (66.6)
<b>Assigned female sex at birth</b>	3 (17.6)	2 (14.3)	1 (33.3)
Current gender: male	14 (82.4)	12 (85.7)	2 (66.6)
Current gender: female	3 (17.6)	2 (14.3)	1 (33.3)
Non-Hispanic or Latino ethnicity	16 (94.1)	13 (92.9)	3 (100)
Hispanic or Latino ethnicity	1 (5.9)	1 (7.1)	0 (0)
White/Caucasian race	15 (88.2)	12 (85.7)	3 (100)
Black/African American race	1 (5.9)	1 (7.1)	0 (0)
Multi-racial	1 (5.9)	1 (7.1)	0 (0)
<b>Education</b>			
Less than high school	1 (5.9)	1 (7.1)	0 (0)
High school or G.E.D	1 (5.9)	1 (7.1)	0 (0)
Some college (less than 2 years)	2 (11.8)	2 (14.2)	0 (0)
Associate degree or > 2 years of college	4 (23.5)	3 (21.3)	1 (33.3)
Undergraduate degree or equivalent	4 (23.5)	3 (21.3)	1 (33.3)
Professional degree	2 (11.8)	2 (14.2)	0 (0)
Doctorate degree or equivalent terminal degree	3 (17.6)	2 (14.2)	1 (33.3)
<b>Marital status</b>			
Single, never married	9 (52.9)	8 (57.1)	1 (33.3)
Registered domestic partners	1 (5.9)	1 (7.1)	0 (0)
Married, without children	1 (5.9)	1 (7.1)	0 (0)
Married, with children	1 (5.9)	1 (7.1)	0 (0)
Divorced	1 (5.9)	0 (0)	1 (33.3)
Widowed	4 (23.5)	3 (21.4)	1 (33.3)
<b>Health Characteristics</b>			
Terminal/Chronic Illness			
Cancer	14 (76.4)	13 (92.2)	1 (33.3)
Cardiovascular disease	2 (11.8)	1 (7.7)	1 (33.3)
Neurodegenerative disease	1 (5.9)	0 (0)	1 (33.3)
<b>Reported disability</b>	10 (58.8)	9 (69.2)	1 (33.3)
<b>Time from HIV diagnosis to treatment in years (median, IQR)</b>	0 (0-4.75)	0 (0, 1)	0 (0, 4)

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**Table 2:**

Demographic Characteristics of Next-of-Kin/Loved Ones (San Diego, CA, 2017 – 2022)

	Next-of-Kin/Loved Ones
	N=17 (%)
<b>Age in years, mean (std. dev.)</b>	56.5 (13.1)
<b>Current gender: male</b>	10 (58.8)
<b>Current gender: female</b>	7 (41.2)
<b>Relationship to Last Gift and On Deck Participants</b>	
Partner/Spouse	5 (29.4)
Sibling	4 (23.5)
Friend	3 (17.6)
Child	2 (11.8)
Parent	1 (5.9)
Grandparent	1 (5.9)
Nephew	1 (5.9)

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