





# BMJ Open Can youth-engaged research facilitate equitable access to contraception in Canada? The qualitative study protocol for the Ask Us project

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## ABSTRACT

**Introduction** There is little to no evidence in Canada on the barriers that youth face when accessing contraception. We seek to identify the contraception access, experiences, beliefs, attitudes, knowledge, and needs of youth in Canada, from the perspectives of youth and youth service providers.

**Methods and analysis** This prospective, mixed-methods, integrated knowledge mobilisation study, the Ask Us project, will involve a national sample of youth, healthcare and social service providers, and policy makers recruited via a novel relational mapping and outreach approach led by youth. Phase I will centre the voices of youth and their service providers through in-depth one-on-one interviews. We will explore the factors influencing youth access to contraception, theoretically guided by Levesque's Access to Care framework. Phase II will focus on the cocreation and evaluation of knowledge translation products (youth stories) with youth, service providers, and policy makers.

**Ethics and dissemination** Ethical approval was received from the University of British Columbia's Research Ethics Board (H21-01091). Full open-access publication of the work will be sought in an international peer-reviewed journal. Findings will be disseminated to youth and service providers through social media, newsletters, and communities of practice, and to policy makers through invited evidence briefs and face-to-face presentations.

## INTRODUCTION

The unmet need for contraception among youth remains high globally, particularly for those who face structural and systemic barriers to equitable health service access.<sup>1 2</sup> Recent data on youth contraception patterns in Canada indicate that youth face cost barriers due to lack of subsidised options and/or household income, and youth who require or desire confidential access have the most difficulty acquiring their preferred contraception methods.<sup>3 4</sup> Youth with the ability to become pregnant have the right to

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Our theory-informed, qualitative approach will generate rich evidence on the factors that influence equitable access to contraception care for youth.
- ⇒ Our integrated knowledge translation approach provides youth with the flexibility to determine the most meaningful methods of engagement, data collection, and knowledge mobilisation.
- ⇒ Youth stories about contraceptive access will be developed into end-of-project knowledge translation stories in partnership with youth, to accelerate the uptake of our study results into policy and practice.

choose if and when to have children.<sup>5</sup> It is necessary to provide youth with health system supports that provide access to contraception that matches their needs, preferences, and attitudes.

In Canada, the most effective contraceptive options, Long-Acting Reversible Contraception (LARC), are used by less than 10% of people of all ages with a need for contraception, and uptake is even lower among youth,<sup>6-9</sup> young people in the period associated with the transition from adolescence to adulthood.<sup>10</sup> These methods are recommended as a first-line option for youth by the Canadian Paediatric Society<sup>9</sup> and Society of Obstetricians and Gynaecologists primarily because of their effectiveness in pregnancy prevention.<sup>7 8</sup> These methods include intra-uterine devices (IUD) and the subdermal contraceptive implant. Low uptake of these options across populations is due to myriad individual, social, and health system factors. For instance, lack of geographic access to LARC placement and removal options may make it impossible to translate a person's



desire to prevent pregnancy into health behaviours for identifying and using their chosen method.<sup>11</sup>

There are limited Canadian data on the factors influencing contraception access among youth; however, cost is a clear contributor. Analysis of 2009–2014 Canadian Community Health Survey data showed that among females aged 15–24 at risk of unintended pregnancy, lower household income was associated with decreased use of oral contraceptives and increased reliance on injectable contraceptives or condoms alone.<sup>4</sup> In a survey of youth aged 14–21 in the province of Quebec, youth who reported being unable to access their preferred method of contraception most often cited cost as a barrier.<sup>12</sup> Canadian provincial and territorial healthcare plans cover the costs of specific drugs on their formularies for populations including those who are low-income, receive social benefits or are Indigenous. Yet most do not cover all contraceptive methods, and coverage through work-subsidised extended health benefits is inconsistent, creating system-level barriers to the full range of contraceptive options.<sup>13</sup>

One related concern for youth is confidentiality. Confidential services increase youths' trust in their care, which in turn increases the chance that youth will provide a complete sexual history and discuss concerns and needs that they cannot share with a parent.<sup>9 14</sup> Youth who are sexually active and experience cultural or familial interdictio require confidential access to contraception.<sup>15–17</sup> When these youth receive extended health benefits through their parent or guardian, a report is available to that person. Thus, despite having insurance, youth often will need to pay directly for contraception, to preserve their confidentiality.<sup>3</sup> Confidentiality is also of concern for youth in remote or close-knit communities where healthcare workers may be known to them. Yet, the existing evidence does not identify how confidentiality influences youth contraceptive choices in Canada.

The literature, although limited, about youth and their contraceptive preferences comes primarily from the US<sup>18–26</sup> and UK studies.<sup>27–29</sup> Results of a survey involving contraceptive knowledge and attitudes of 897 female youth demonstrated that youth have lower awareness and knowledge about contraceptive options, particularly LARC methods, than people of other ages.<sup>30</sup> Among teens, 63% misbelieved that a person needed to undergo an operation to have an IUD, and 71% that negative effects from the contraceptive injection would last their lifetime.<sup>30</sup> Youth who hold mistaken beliefs about contraception are less likely to seek care when they become sexually active.<sup>30</sup> Given these data, there is a pressing need to understand contraceptive choices of youth in Canada. In our study (Ask Us: Youth Voices to Improve Contraception Access), we seek to answer the question: 'What are the contraception access experiences, beliefs, attitudes, knowledge and needs of youth in Canada, from the perspectives of youth and youth service providers?'

## METHODS AND ANALYSIS

We will conduct this 4-year study in two phases. Our aims are to:

### Aim 1

Investigate the experiences, beliefs, attitudes, knowledge, and contraceptive access needs of youth (aged 15–25) in Canada from the perspectives of youth and service providers.

### Aim 2

Identify the attributes of contraceptive options that matter most when making decisions about methods to use, from the perspectives of youth and service providers.

### Aim 3

Create and test knowledge translation (KT) products of 'youth stories', to communicate results to youth, healthcare professionals, and decision makers in Canadian contraception policy and practice.

### Study design

The primary mode of data collection will be one-on-one interviews. Youth stories about contraceptive access will be developed into end-of-project KT products in partnership with youth, using principles of narrative theory and user-centred design. These may consist of 2-minute whiteboard and/or live videos of patient stories or text-based infographics, as well as evidence briefs for policy makers. We will create and disseminate these youth stories to Canadian stakeholders (providers, policy makers, and patients) in real time.

### Integrated knowledge translation

This study is part of the larger research programme of our thriving national Contraception and Abortion Research Team (CART) and builds on over 10 years of family planning research collaborations. The CART research programme is built on an integrated knowledge translation (iKT) approach whereby policy makers collaborate in all stages of the research process.<sup>31 32</sup> This approach resulted in rapid removal of federal restrictions on the abortion pill in Canada in 2017, its first year of availability, making it accessible in primary care settings.<sup>33–38</sup> However, disseminating research with policy makers is challenging when they perceive the data to be complex or political, as can occur with family planning evidence.<sup>39–41</sup> Our iKT collaborations—underpinned by an anti-oppressive, equity-based approach of partnering closely with youth throughout the research process—aim to improve the acceptability, usefulness, and relevance of knowledge by coproducing it with the people best positioned to make evidence-informed decisions. This approach aims to shorten the time it takes to move evidence into practice, and in turn make rapid impact on contraception access for youth in Canada.

### Theoretical framework

Our approach will be guided by social constructivist grounded theory.<sup>42 43</sup> Following feminist and standpoint



**Figure 1** A conceptual framework of access to care, adapted from Levesque *et al.*<sup>46</sup>

theories, constructivist grounded theory emphasises the importance of researcher flexibility and positionality. Feminist approaches start from the broad shared goal to challenge gender-based oppressions and inequities.<sup>44 45</sup> The hallmark of these approaches is reflexive interviewing. Throughout the study, our team will practice reflexivity by challenging our assumptions and staying attuned to power imbalances as well as our and participants' social positions.

We will use Levesque's Patient-centred Access to Care framework<sup>46</sup> as a theoretical guide (figure 1). Levesque incorporates factors that impact access to care from two perspectives: supply (approachability; acceptability; availability and accommodation; affordability; appropriateness) and demand (ability to perceive; seek; reach; pay; engage). These factors are interdependent, contextual, and dynamic. We will conduct interviews with providers (supply) and youth (demand).

#### Sex and gender-based analysis+

We will collect and report data on self-identified sex and gender, following SAGER guideline reporting standards.<sup>47</sup> We will consider both gender and sex during recruitment and screening to ensure that a diverse array of youth participate in the study.<sup>48 49</sup> In qualitative analysis+, we will consider sex and gender as contextual factors to understand participants' lived experiences and the process of accessing contraception care. The + sign denotes that gender does not exist in isolation and intersects with age, income, immigrant status, cultural background, geographic location, and education to produce conditions of empowerment or marginalisation which, in turn, effect health access.<sup>50</sup>

#### Setting and participants

We will recruit participants from all Canadian provinces and territories. Participants will include (1) youth aged 15–25 and (2) healthcare professionals who provide

contraceptive care to youth. For the purposes of this study, we define youth in both conceptual and temporal terms. Conceptually, we define youth as individuals in the developmental stage of emerging adulthood, a well-established definition used to identify the period associated with the transition from adolescence to adulthood. During this period, young people engage in identity exploration and development in order to transition into their personal and professional lives as adults.<sup>10</sup> While Statistics Canada defines youth as aged 15–29, we selected an upper limit of age 25 as it is typically used as an age cut-off in Canada for youth contraceptive subsidy programmes,<sup>51</sup> paediatric contraception guidelines,<sup>3 9</sup> and survey-based analyses of youth contraception access.<sup>4 52</sup> We will invite youth to self-identify through a 3-item screening (When were you born (year and month)?; Do you currently reside in Canada?; Have you ever used, wanted or considered contraception?). We will include people who use, want, or consider contraception for purposes in addition to preventing pregnancies. We will exclude people who self-report that they are younger than 15 or older than 25, or who answer 'no' to any of the above questions. We will work with our community partners to recruit a spectrum of youth across Canada, including from low-income, rural, newcomer, and racialised communities as well as trans and gender-diverse people. We will advertise the study materials in multiple languages and include Youth Research Associates (YRAs) on our team who speak English plus one or more of French, Mandarin, Cantonese, Punjabi, Hindi, or Spanish. We will hire a translator or community partner for participants who feel most comfortable conducting the interview in another language.

#### Recruitment

Our two-phase sampling strategy will begin with a purposeful sampling frame across provinces and territories, rural and urban settings, gender, age (15–17, 19–22,





and 23–25) and ethnicity. As data collection progresses, we will engage in additional theoretical sampling to confirm/disconfirm results, fill in data gaps, and refine our evolving theory.

- ▶ **Youth:** We will use a multifaceted, community-based strategy to recruit youth, including a study website, social marketing campaign (eg, Instagram advertising and re-posting of study ads by youth-oriented and health-oriented organisations), and snowball sampling. Youth researchers on our team will design and implement a youth outreach strategy using principles of ‘relational’ stakeholder mapping<sup>53–56</sup> to engage youth-serving organisations. These YRAs will then engage individuals from youth-serving organisations in knowledge brokering; for example, they may provide social media content development training in exchange for a welcome platform to share information about our project.
- ▶ **Healthcare professionals:** We will recruit through listservs of health professional organisations (eg, Society of Obstetricians and Gynaecologists of Canada, Canadian Pediatric Society, Canadian Pharmacists Association, Nurse Practitioner Association of Canada), youth sexual health clinics, sexual and reproductive health organisations (eg, Action Canada for Sexual Health, Options for Sexual Health), and email listservs for family planning providers (eg, Canadian Abortion Providers Support Platform). Interested participants will receive the online consent form.

Each participant will be offered an honorarium of \$50 for their participation in an interview. We will collect data until we reach saturation by informational redundancy (new data repeats previous data) and have sufficient data to explain the phenomenon.<sup>57</sup> To ensure we have a diverse, information-rich sample, we will seek to saturate each subgroup in our purposeful sampling framework: rural and urban youth; those in each province and territory; immigrant, refugee and newcomer youth; disabled youth; Black, Indigenous and People of Colour; Two-Spirit, Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, Asexual, Intersex youth. Based on analogous studies<sup>35 58</sup> we will likely conduct interviews with 10–15 youth per group, acknowledging that participants will have intersecting identities. We predict our sample of youth will thus be upwards of 100 total participants.

### Data collection

Our data collection methods seek to promote confidentiality and build trust, and have been codesigned with the team’s YRAs. We will first invite youth participants to complete an online enrolment survey using REDCap electronic data capture tools<sup>59 60</sup> hosted at the BC Children’s Hospital Research Institute. This survey will collect demographic data to provide context on identity characteristics that will assist in our qualitative interpretation, our sex- and gender+ analysis, and our purposeful sampling. Interested participants will also indicate their preference for either an in-depth, open-ended 60min audio

interview by phone or Zoom software, or to complete a written interview on a confidential study website form. Youth perceive that asynchronous written interviews by email or website are acceptable, confidential methods for sharing sensitive reproductive experiences, particularly compared with face-to-face data collection<sup>58 61</sup> and in a COVID-19 context.<sup>62</sup> Nearly 100% of youth in Canada aged 15–30 use the internet daily, a trend observed across all provinces and household income groups.<sup>63</sup> These ethical and access considerations will be discussed on an ongoing basis with community groups who are partners in this work. Considerations may include shorter interviews, in-person interviews, and the inclusion of a third party or social worker to the interview space to better support youth. The youth consent form, demographic information, and (if applicable) written interview data will be linked automatically through a numeric participant identification generated by REDCap.

We will conduct in-depth interviews with healthcare professionals to investigate their perspectives on the accessibility and appropriateness of existing resources and supports for contraceptive decision-making for youth, and opportunities for improvement. We will collect and document basic demographic information (postal code, primary specialty, age, gender, experience prescribing contraception with youth) verbally before the start of healthcare professional interviews.

Each 60–90min audio interview will be conducted by the lead author or an experienced trainee, with a translator or YRA present if the participant desires language support. Our topic guides will consist of open-ended questions about access to contraception and probes to explore the dimensions of Levesque’s Access Framework (see online supplemental files 1 and 2).<sup>46</sup> This also will include where and how youth would like to access services, including in pandemic and non-pandemic conditions. We will probe for knowledge and perceptions of feasibility and acceptability of LARC and youth-led health services. After each interview, we will provide youth with a list of resources in case they have follow-up questions or interest to access contraceptive care. Interviews with youth will begin before those with service providers, to ensure that our theory is grounded first in youth experiences.

### Data analysis

Interview data will be transcribed and translated, if applicable, by professional transcription and translation services. Trainees who conducted the interviews will lead data analysis, with guidance from the lead author and the YRAs. Our analysis team will independently read and code a sub-set of transcripts. The coding process has four steps: (1) open and *in vivo* coding to identify properties of emerging concepts, (2) focused coding to identify and organise codes into batches of similar or related phenomena, (3) comparing data to data (constant comparison), and (4) theoretical coding to sort, synthesise and organise the data into major conceptual categories.<sup>42</sup> We will compare our codebooks and engage in

discussion to achieve conceptual and semantic congruency, and then code another two transcripts to test our merged codebook to ensure it makes implicit processes and structures visible. Next, using the finalised codebook, the analysis team will independently code a sub-section of transcripts (each transcript will have two coders). We will meet weekly to discuss our interpretations and revise the codebook as needed. Coding will be facilitated by use of NVivo analysis software (V.12).<sup>64</sup> All qualitative analyses will include consideration of how sex, gender and other diversity characteristics influence experiences and attitudes at individual and system levels.<sup>48</sup> To assist interpretation, we will draw visual maps of those characteristics, relationships and social worlds using grounded theory mapping techniques.<sup>65</sup>

**Verification strategies**

Throughout the research, we will pursue verification strategies to ensure reliability and validity, including constant comparison (comparing open-ended responses and interview data for each participant, among youth, among healthcare professionals, between samples and over time), keeping a data trail and sampling to theoretical sufficiency.<sup>66 67</sup> Our assessment of *sufficiency* will be guided by the question, ‘Given the theory, do we have sufficient data to illustrate it?’. To establish *trustworthiness* of the data, each participant will be asked if they consent to be emailed a password-protected transcript of their interview for member-checking feedback (ie, review what they said, edit as needed, and add more information). We also will write memos throughout to engage in self-reflection, identify gaps in data collection, and serve as a record of the analytic process.

**Human-centred design, development and evaluation of youth stories**

We will use the knowledge generated in phase I to ideate, prototype, and test ‘youth stories’. We anticipate that youth narratives on contraception access will help provider, policy maker, and patient audiences prioritise, understand, and recall information, and enhance interest in youth lived experiences.<sup>68–71</sup> Our evaluation

will assess the impact of the stories on audience *knowledge* (primary outcome) and *narrative immersion* (eg, interest, involvement, empathy), as well as *unintended outcomes* (persuasion).

**METHOD**

We will employ user-centred design to develop and evaluate youth stories, a well-established approach that involves ideation, rapid prototyping, and iterating on the strengths and weaknesses of prototypes so that innovations may be designed quickly and with the direct input and preferences of actual ‘end-users’ of a specific product or service.<sup>72–74</sup> It involves five steps: (1) *empathise* (understanding the way people do things and why), (2) *define* (expressing the specific problem the intervention will address), (3) *ideate* (generating solution concepts), (4) *prototype* (building models to elicit feedback from colleagues) and (5) *test* (soliciting feedback from users).<sup>75</sup> See figure 2 for an illustration of these steps. We will continue to follow feminist and standpoint approaches in phase II, practicing reflexivity by challenging our assumptions about the knowledge generated in phase I, and seeking to be attuned to end-users’ comfort level, differences in power and status, and the effect of gender, race and age on the user-centred design process.

**Study population and recruitment**

Our design process will engage the three key audiences for this programme of research: youth and healthcare professionals (as in phase I), as well as health system decision-makers responsible for the planning and delivery of contraceptive services. We will send email invitations to the youth and healthcare professional participants from phase I, asking if they would be interested to contribute to a workshop to codesign youth stories. To recruit health system decision makers (eg, public health officials, civil servants and politicians), we will advertise the study by email invitation through the listservs of the CART, as well as health professional and regulatory organisations in each province and territory, as in our pilot research.<sup>76</sup> We

<b>Empathize</b> Understanding the way youth access contraception	<b>Define</b> Expressing the specific problem the KT products will address	<b>Ideate</b> Generating solution concepts for how to present youth stories	<b>Prototype</b> Building KT products to elicit feedback from youth and providers	<b>Test</b> Soliciting feedback from youth and providers

**Figure 2** User-centred design process to develop and evaluate youth stories.

will conduct the workshops virtually by video conference to account for national diversity in populations, health service delivery, and access experiences, and to make it easy and accessible for participants in different regions and time zones.

### Workshop activities

The *empathise* and *define* stages will be completed through phase I interviews. In phase II, design thinking workshops will allow us to *ideate*, *prototype*, and *test* and will be cofacilitated by the first author, a trainee, and at least one YRA. The YRAs will have been involved in the phase I data analysis and will collaborate with the trainees to review the de-identified transcripts and extract stories that best illustrate key themes from phase I. Each draft prototype will take the format of a 'wireframe' or storyboard to facilitate in-depth feedback. This preliminary work to develop the storyboards will be conducted through an end-of-project team workshop. We will build stories according to the Narrative Immersion Model (NIM)<sup>71 77</sup> using experience and process narratives and evaluating them with end-users prior to dissemination. The NIM indicates that when the target effect of a narrative is to inform, then *experience narratives* (eg, what it is like to access contraception) and *process narratives* (eg, how youth made a contraceptive choice) are appropriate and can mitigate unintended changes in audience attitudes and behaviours.

Then, we will conduct human-centred design workshops to refine prototypes. Workshops will be conducted via Zoom and consist of (1) a short presentation on phase I and the prototype 'storyboards', followed by (2) a moderated discussion to brainstorm and generate ideas, first in breakout rooms and then as a group. The aim is to focus participant ideas towards creation of a series of refined testable prototypes for the youth stories. These decisions will be emergent and co-determined with youth participants. The stories will be composite or aggregate, rather than individual. Combining the stories from a large number of people can assist to both protect participant anonymity and convey a systemic story, as opposed to a single event or individual experience.<sup>68</sup> The workshops will be audio-recorded and transcribed by Zoom software to facilitate iterative revision of the prototypes. After feedback from each session, we will revise the prototype storyboards.

Based on best practices,<sup>78 79</sup> we anticipate to conduct three or more cycles of ideation and prototyping to generate prototypes that address our KT aims and are satisfactory to all workshop participants. We plan to hold a total of 10 workshops, including: (1) at least three workshops each with youth, healthcare professionals, and policy makers involving five participants each, which our experience has identified is an optimal number for generating ideation and discussion and (2) one synthesis workshop involving all three stakeholder groups and led by the YRAs to generate shared meaning and ensure the final prototypes are inclusive and reflect youth voices.

### Evaluation

Using the same recruitment strategies as in phase I, we will recruit health system decision makers, healthcare professionals, and youth who are naïve to the study design. The evaluation will be completed via an online survey (REDCap). We will ask participants to complete a demographic questionnaire and a knowledge pretest involving five statements about contraception access, each scored on a 5-item Likert scale ranging from strongly agree to strongly disagree. Participants will be presented with the suite of stories to review and will complete a post-test. The post-test will include the same 5-item knowledge test used in the pretest and a single-item question with a yes/no response: 'Did reading the stories give you information about contraception access that you did not have before?'

After completing these tasks, participants will complete a qualitative survey investigating perceptions of other elements of the NIM (eg, interest, involvement, immersion) and unintended outcomes (eg, persuasion).<sup>71</sup> We will measure change in knowledge by comparing pretest and post-test scores from the 5-item knowledge test (non-parametric Wilcoxon signed-rank test).<sup>80</sup> Statistical significance will be denoted as  $p \leq 0.05$ . We will report qualitative responses using reflexive thematic analysis, stratified by audience type.<sup>81–83</sup> We will evaluate the reach of youth stories and study website performance through Google analytics, unique website visitors, view count, engagement (watch time per view), video shares and (dis)likes, and hashtag tracking. We will report data descriptively.

Following evaluation, we will produce final versions of the youth stories. Based on best practices,<sup>84</sup> these may consist of 2 min whiteboard and/or live videos of patient stories or text-based infographics, as well as evidence briefs for policy makers. The methods will be determined through the design workshops we complete in phase II.

### Patient and public involvement

The research question and study design were codeveloped with patient partners from the UBC Youth Research Advisory Panel through a series of workshop meetings. As described above, YRAs (patient partners) are full members of the research team, guiding all study decisions and engaging in recruitment, data collection, and analysis and dissemination of youth stories.

### Ethics and dissemination

Ethical approval for this study has been provided by the UBC Behavioural Research Ethics Board (H21-01091). Results will be published in peer-reviewed journal publications. Due to the sensitive nature of the research and ethical restrictions to protect the privacy of research participants, the qualitative dataset will not be publicly available. The participants of this study will not provide written consent for their transcript data to be shared publicly.



## DISCUSSION

Our research will generate evidence on the contraception access needs of youth in Canada. The Ask Us project has the potential to inform Canadian contraceptive policy and practice to mitigate youth access barriers; improve contraception access for youth; and ultimately, reduce rates of unintended pregnancy and need for abortion among youth. To accelerate the impact of our research, we will translate the knowledge generated through this project into tangible KT tools in partnership with knowledge users through an inclusive design process.

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**Contributors** SM and GDM developed the study concept and approach with input from all coauthors. SM and AW wrote the first draft of the manuscript. KJ, ZK, HS and WVN significantly contributed to the design. SM, GDM, AW, SPB, SB, AB, AC, MF, KJ, ZK, RM-M, SM, VP, HS, C-AV, KW, WVN contributed to writing the manuscript and all revisions and reviewed and approved the final manuscript.

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**Competing interests** GDM is a member of the Adolescent Health Committee, Canadian Paediatric Society and lead author of the policy statement advocating for universal no-cost access to contraception published by the Canadian Paediatric Society. AB has received Advisory Board consulting fees from Organon, Bayer, Mithra, as well as honoraria for lectures and presentations from Bayer, Organon and Searchlight. AB is also President-Elect and Director of the Board for the Society of Obstetricians and Gynecologists of Canada. ZK is a Board Member with Options for Sexual Health. MF is employed by Options for Sexual Health.

**Patient and public involvement** Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

**Patient consent for publication** Not applicable.

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