The University of Arizona Consent to Participate in Research

Study Title: Smartphone app for management of Lipedema and Dercums Disease

Principal Investigator: Karen L. Herbst, PhD, MD

Sponsor: TREAT Foundation

About this consent form

The following pages explain important information about the RADSResearch app, and how the app is part of a research study.

Please read this form carefully.

Taking part in this research study is voluntary and is up to you. If you decide to take part in this research study, you must sign this form to show that you want to take part. We will give you a signed copy of this form to keep. If you have any questions about the research or about this form, please ask us.

People who agree to take part in research studies are called “subjects”. This term will be used throughout this consent form. Banner HealthCare System is made up of hospitals (including University of Arizona Hospital, where this study originates), health care providers, and researchers. In the rest of this consent form, we refer to the Banner healthcare system simply as “Banner”.

This study is sponsored by the Treatment, Research and Education of Adipose Tissue (TREAT) Research Center at University of Arizona in Tucson, AZ

About this Consent Form

This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to discuss the study with your friends and family and to ask questions before making your decision whether to participate.

Why is this study being done?

Today’s mobile phones (especially smartphones) are becoming powerful platforms for communicating, computing and sensing. We are investigating ways to help people make use of the capabilities of their smart phones to improve their health, and more successfully manage their lipedema and Dercum’s Disease, both rare adipose disorders.

This study will make available to the public a free app (RADSResearch) that users can install on their smartphones. The app will provide a variety of services to help users track their daily behaviors (such as activity/exercise, eating, logging lab checks, and taking medications). Moreover, it will help them gain insight into their behavior patterns while attempting to encourage healthy activities. For instance, by analyzing the activity, diet and exercise data, the app can give users personal insights into what food items and exercise patterns are most commonly associated with optimal levels of RADS management.

At the same time, app data from user's smartphones will be stripped of any features that might be personally identifiable (such as name or email address), and each user's app data will be associated with only a randomized number. By analyzing this coded data across all app users, researchers can better understand the relationships between food, exercise, medications and lab levels in large numbers of people with a RADs disorder.

The goals of this research study are:

- Examine the feasibility of enrolling a large cohort of users who download and install the app, complete informed consent, and use the app. The app will be made available to the public via the Apple iTunes Store at no cost.
- Study whether displaying tracked health behaviors to users on their smartphones can help users improve their health behaviors, engage with the app over a sustained period of time, and keep dercums and lipedema from further progressing.
- Better understand the relationships between food, activity, medications and lab results in large numbers of people with lipedema and Dercum's disease

How long will I be in the study?

If you choose to participate, this study lasts for one year. After one year, your app data will no longer be analyzed as part of the study; however, you are free to continue using the app for the personal insights if you wish.

Entering information and responding to surveys should take on average a few minutes each day. Occasionally, tasks may take a little longer (e.g., a longer questionnaire).

What happens if I am injured because I took part in this study?

If you suffer an injury from participating in this study, you should seek treatment. The University of Arizona has no funds set aside for the payment of treatment expenses or other forms of compensation (such as for lost wages, lost time, or discomfort) for this study. You will obtain medical care in the same manner as you ordinarily obtain any

treatment. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

You will be provided with any new information that develops during the course of the research that may affect your decision whether or not to continue participation in the study.

When may participation in the study be stopped? Your participation in this study may be stopped or limited by the investigator, if she considers that certain procedures represent an increased risk for you.

What will happen in this research study?

This study will ask you to perform tasks and respond to surveys.

When users first launch the app, they will be asked to review a series of screens that describe the study and the relevant risks and benefits ("informed consent" process) so they can decide whether or not they wish to participate in the research study (participation in the research study is required in order to use the app); if they wish to participate, users will certify their agreement with the informed consent by entering their name and an email address (the email address is only used to enable users to receive a copy of the completed informed consent document – this document – in their email. Name and email will not be associated with any app data).

RADSResearch will ask you to:

• Answer survey questions about your health behaviors

• Log your lab values

• Log what you eat, as best as you can. We will ask you to log your meals using the free app "Lose It!", which will provide nutritional information to the RADSResearch team.

The app sends occasional reminders to complete study activities.

RADSResearch uses the iPhone's built-in accelerometer to passively keep track of physical activity ("passive" because this happens automatically and you do not need to enter any information) . The app interprets accelerometer data as steps taken, or as different intensity levels of activity .

For these activity measures to be accurate, you should carry the iPhone on your person as much as possible (e.g., in your pocket, or clipped to your waist). For instance, if the iPhone is resting on a table when you go for a walk, it will not be able to detect this activity.

RADSResearch will collect some of its data on your health behaviors through short survey questions, such as:

• Over the past week, did you take some or all of your RADs medications?

Occasionally, there will also be longer surveys that evaluate aspects such as your quality of life, or your sleep duration and quality.

For dietary information, RADSResearch will ask you to use the free “Lose It!” app to log what you eat for meals.

RADSResearch will also ask about some information that requires a brief task away from the iPhone, such as:

• Your weight

• Your waist circumference (occasionally)

RADSResearch provides personalized feedback in the form of graphs and text to display your progress, and provide insights into your health behaviors. The app summarizes data about how food or exercise patterns are associated with RADs pain and quality of life. These insights may help you understand your health behaviors better, and help you manage your lipedema or dercums disease better. Viewing the graphs and text is optional but may be useful or interesting to you.

In your Profile within RADSResearch, you can set reminders for yourself to complete app activities. In general, more data entered in the app results in more accurate and informative insights.

What are the risks and possible discomforts from being in this research study?

There are possible risks, discomforts and inconveniences associated with any research study. This study does not involve testing any new drugs or therapies, so we do not expect any medical side effects from participating.

The app is not designed to give medical advice, nor make suggestions related to RADs treatment or medications.

The primary concern associated with this study is privacy risk. For instance, if someone sees the app on your phone screen, they may guess that you have a medical condition.

You may feel inconvenienced by having to enter information into the app, or seeing the reminders or messages that are sent by the app.

Any information you provide is completely up to you. You can decline to answer survey questions or participate in the app’s tasks. If a survey question makes you feel uncomfortable, you are free to leave questions blank.

As with any smartphone app, use your common sense and follow prevailing laws about when and where you use your iPhone. Just as you would not text while driving, do not interact with the app while driving or doing any other activities which could result in

injury. You can always wait until you are in a safe place to perform any app-related tasks.

Please see the sections on “Protecting Your Privacy” to learn more. Study participation may involve risks that are not known at this time.

What are the possible benefits from being in this research study?

One of the biggest challenges for people with Dercums or Lipedema is tracking their behaviors and activities and determing what works or does not work for them.

RADSResearch analyzes your data to provide personalized insights and feedback to help you understand how your health behaviors (e.g., diet, physical activity) can influence your RADS quality of life. This may help you manage your RADS.

More generally, patients with lipedema or dercums may ultimately benefit from this research, because RADSResearch and its research study will create an unprecedented crowd-sourced database of health behaviors from people like you. Studying all this real-world data will help researchers better understand the relationships between diet and exercise in real-world people with RADs. (Traditionally, these studies are done by asking people to fill out very long

questionnaires on paper every few years.) It will also help explore how the iPhone or smartphones can enable new kinds of clinical research.

By combining a personal app and a research study, RADSResearch will help explore how the iPhone can enable new kinds of clinical research.

This study may also help researchers better understand what strategies in smartphone apps are well received among users, encourage more durable use of the app, and are most effective in reinforcing healthy behaviors.

Can I still get medical care with Banner or Dr. Herbst if I don’t take part in this research study, or if I stop taking part?

Yes. Regardless of where you get your medical care, your decision to participate or not will not change the medical care you get at a Banner hospital or anywhere else. Taking part in this research study is up to you.

What should I do if I want to stop taking part in the study? If you start the research study but later wish to drop out, simply contact the study investigators through the app. You may choose to leave the study at any time. Your decision will not result in any penalty or affect your medical care through your usual physicians or providers. Afterwards, you are free to delete the app from your smartphone.

The study investigators may also withdraw you from the study without your consent at any time for any reason, including if the study is cancelled.

What are the costs of taking part in this study?

There are no costs to you or your insurance for study participation. You do not have to pay for any of the procedures of this research protocol. If you receive a bill for services that you think could be related to your participation in this study, you should contact Dr. Karen Herbst.

Will I be paid for taking part in this study?

Participation will be voluntary; you will not be paid for your participation in this study.

Who can answer my questions about the study?

For questions, concerns, or complaints about the study you may contact Dr. Herbst 520-626- 7689 or Christopher Ussery 520-626-7689. If you cannot reach the investigator in an emergency, you may call the 24-hour number 520-694-5868.

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program at 520-626-6721 or online at http://rgw.arizona.edu/compliance/human-subjects-protection-program.

If you are injured as a result of participating in this study or for questions about a study-related injury, you may contact Dr. Herbst, Tel., 520-626-7689 or 520-694-5868.

An Institutional Review Board responsible for human subject's research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

If I take part in this research study, how will you protect my privacy?

We are committed to protecting your privacy. We take several steps to protect your privacy and the privacy of your app data.

For security, RADSResearch require s that your iPhone be protected either by a passcode or the Apple Touch ID fingerprint sensor. This ensures that only you can enter and use the app. One potential loss of privacy would be if someone sees RADSResearch on your iPhone and then suspects that you have RADs.

To certify that you consent to participate in the study, the app asks you to enter your name and an email address. This allows study investigators to have a record of who participates in the study, and to email a copy of the signed consent form to you.

Your name and email are only used for the consent process, and are not associated with data collected from the app. Your identity (name, email) will be separated from your

app data and kept as confidential as possible. Your app data will be associated only with a randomized study code that bears no relation to any identifiable information. This random code is stored completely separately from any personally identifying information. Only select individuals that are part of the research study will know the identities of people who participate in the study. These steps ensure that researchers analyzing the coded study data will not be able to connect it to any individual user.

Whenever app data is transferred to a research study computer, it will be encrypted so that others cannot interpret the data or associate it back to you.

Encrypted app data (stripped of personal identifiers, and associated only with a random code) will be sent to secure data servers used for the RADSResearch research study that are maintained by DashTrials (http://dashtrials.com). Dash Trials is dedicated to the advancement of science by making available to the scientific community secure computing and database architectures.

Study investigators chose DashTrials for this important responsibility because they are a world leader in the secure storage and protection of sensitive research data . They have a proven track record of safeguarding and managing potentially sensitive biomedical data in accordance with regulations that govern human research and medical information (e.g., regulations mandated by Institutional Review Boards [IRB] and the Health Information Portability and Accountability Act [HIPAA]).

Study investigators will analyze coded app data from everyone who agrees to participate in the RADSResearch study, but they will be unable to connect it back to any individual user.

The results of this research may be published in a scientific or medical research journal so that others can learn from this study. Results will never be published in a way that would allow data to be associated with individual users.

After this study is completed, other researchers who are not part of the original study may request access to the coded study data (already stripped of personal identifiers such as your name or email), so that it can be analyzed in a new way to benefit medical research, or help guide development of future apps. Those requesting data must agree to use the data for research purposes responsibly and ethically, and in accordance with applicable regulations. Qualified researchers must agree to not attempt to re-identify any individuals. Criteria for qualified researchers will be set by the RADSResearch investigators and representatives of Dash Trials. Such criteria may include, but are not restricted to, being associated with an accredited research institution or not-for profit research institution, or submitting proof of IRB approval for their intended data use. Data sharing requests will be reviewed by a group of RADSResearch study investigators and representatives of Dash Trials. Dash Trials will have no oversight over future research

conducted with coded study data.

During the consent process, you will have the option to choose whether you agree to: (i) share your coded study data with qualified researchers (as described in the above paragraph), or (ii) share your coded study data only with the RADSResearch team; if you choose this option, your coded study data will be accessible only to the RADSResearch team and will not be made available to other outside researchers.

Your choice will not affect your ability to participate in the RADSResearch study.

Study data will never be sold to any third party.

If required by law, your data (study data and account information), and the signed consent form may be disclosed to:

• The US National Institute of Health, Department of Health and Human Services agencies, Office for Human Research Protection, and other agencies as required,

• the Institutional Review Board at Massachusetts General Hospital that monitors the safety, and conduct of human research,

• Others, if the law requires

We are required by the Health Insurance Portability and Accountability Act (HIPAA) to protect the privacy of health information obtained for research. This is an abbreviated notice, and does not describe all details of this requirement (see Banner Privacy Notice*). During this study, identifiable information about you or your health will be collected and shared with the researchers conducting the research. In general, under federal law, identifiable health information is private. However, there are exceptions to this rule. In some cases, others may see your identifiable health information for purposes of research oversight, quality control, public health and safety, or law enforcement. We share your health information only when we must, and we ask anyone who receives it from us to protect your privacy. *Banner HealthCare Notice for Use and Sharing of Protected Health Information View Privacy Policy

Will my data or specimens be stored for future research?

Your biologic samples will be processed and stored (banked) at the University of Arizona Institutional Biorepository and in Dr. Herbst's lab as we prepare to study the samples or send them out for evaluation. Some of the evaluation assays will be performed at different institutions by expert researchers that are part of the investigative team. Your samples will be given a study number and the expert researchers will only know your sample by this number and not any identifiable information of yours. All of the specimens and clinical information stored in the "tissue bank" will be de-identified and

study ID number will be assigned. Only the research personnel authorized by the Principal investigator will have access to your personal identifying information. Your name will not be used in any published reports from research performed using your specimen.

Your specimens will be kept until all specimens are used up. If you decide later that you do not want your specimens and information to be used for future research, you can notify the investigator in writing at Attention: Dr. Karen Herbst, 1501 North Campbell Road, Suite 6OPC, Tucson, Arizona, 85724; and then the central storage facility will be notified to destroy any remaining specimens and clinical information. However, if any research has already been done using portions of your specimens, the data will be kept and analyzed as part of those research studies.

Please mark the following if you agree: Do you authorize Dr. Herbst's research team to bank/store your biologic samples for future use to learn more about your disease and other related illnesses? ☐Yes ☐No _____Initials

This is the end of the section about optional studies.

Signing the consent form

I have read (or someone has read to me) this form and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

I am not giving up any legal rights by signing this form. I will be given a copy of this form.

Printed name of subject Signature of subject

AM/PM Date and time

Investigator/Research Staff I have explained the research to the participant or the participant's representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or to the participant's representative.

Printed name of person obtaining consent Signature of person obtaining consent

AM/PM Date and time

Protocol XYZ Approved by Univ. of Arizona IRB (Expires XX-XXX-XXXX)

HSPP Use Only:

Human Subjects Protection Program