



University of California  
San Francisco

# Opportunities for collaboration and leveraging participant recruitment initiatives across UC Health

*October 19, 2016 – UC BRAID Retreat*

Jennifer Creasman and Leslie Yuan  
UCSF

10/21/2016

# What we'll cover today

Participant Recruitment Innovations and advances at UCSF in the last year

1. Use of social media for recruitment and TrialSpark pilot at UCSF
2. The UCSF-wide Trial Finder including tie-ins to UCSF Profiles (our researcher networking system)
3. Seminars and videos
4. Future opportunities for collaboration across UC

# Why Use Social Media for Recruitment?

# Recruitment Tactics

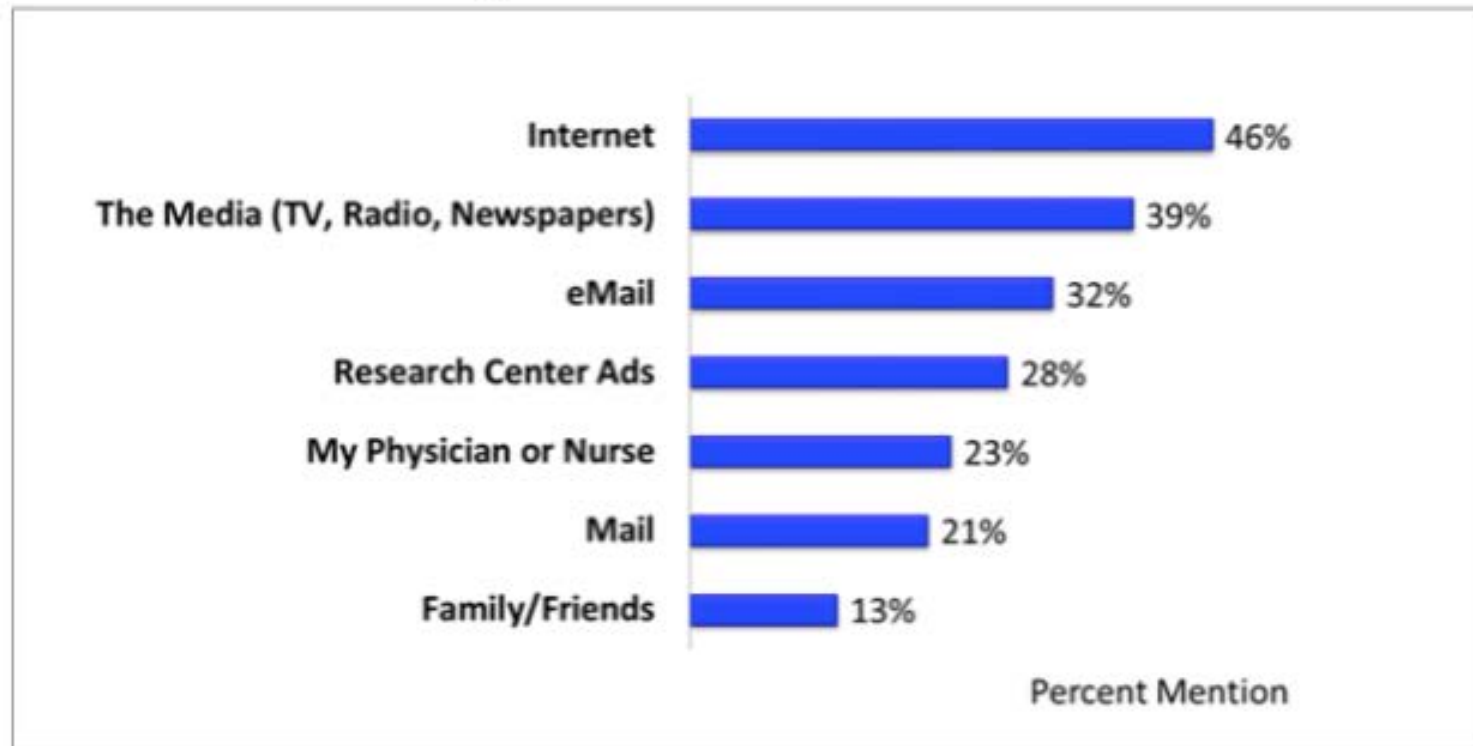
Recruitment Possibilities	Cost	Time for implementation*	Who are you reaching?
Craigslist	Free	+	General Public
Flyers (do it yourself)	\$	+	General Public
UCSF Direct Patient Letters	\$	+++	Diagnosis Specific
Clinic Recruitment	\$	+	Diagnosis Specific
Social Media (Facebook, Twitter, Google ads)	\$-\$-\$	+	General Public/Some general demographic targets (age, region, race)
Health Fairs/Foundations	\$-\$-\$	++-+++	General Public or Condition Specific
UCSF Shuttle Ads	\$-\$-\$	+++	UCSF faculty, staff and patients
Flyers (Service Provider)	\$-\$	++	General Public
Newspapers (County)	\$-\$	+	General Public
Newspaper (Local/neighborhood)	\$-\$	++	General Public
Mass Mailing Service	\$-\$-\$	+++	General Public
Radio Ads	\$-\$-\$	++	General Public

+ About 1 week or less

++ About 2-4 weeks

+++ About 1-2 months

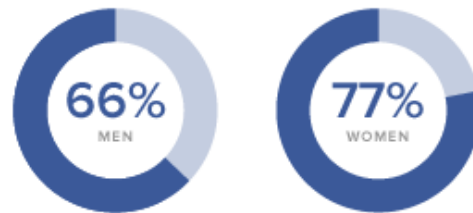
## Top Ways that People Report Finding out About Clinical Trials



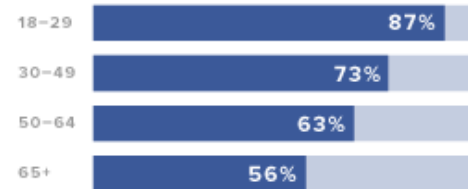
Source: CISC RP, 2013; N=5,701 people worldwide

## Facebook Usage Among Key Demographics

### GENDER



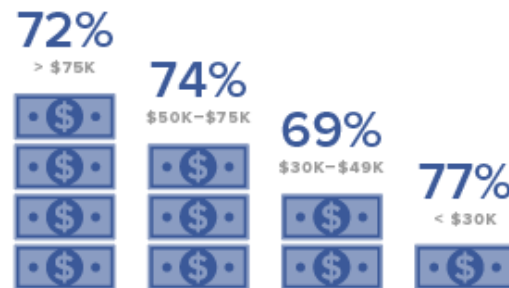
### AGE



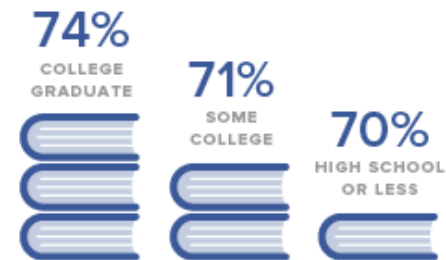
### LOCATION



### INCOME



### EDUCATION



sproutsocial

[http://www.pewinternet.org/files/2015/01/PI\\_SocialMediaUpdate20144.pdf](http://www.pewinternet.org/files/2015/01/PI_SocialMediaUpdate20144.pdf)  
[https://business.facebook.com/ads/audience\\_insights/people?act=143038960&age=18-&country=US](https://business.facebook.com/ads/audience_insights/people?act=143038960&age=18-&country=US)

# Participant Recruitment Metrics

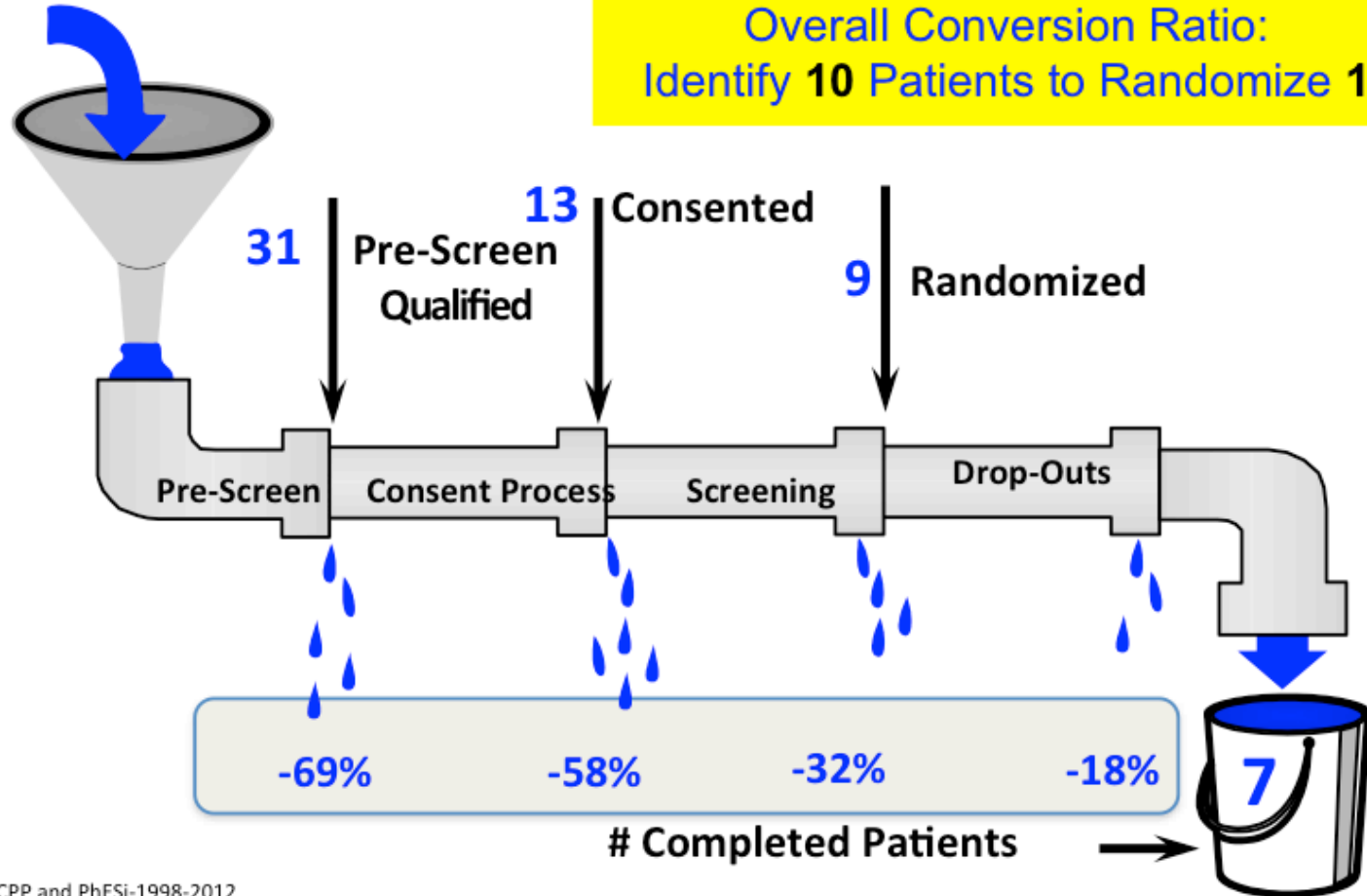
# The “Typical” Funnel

Average Industry Benchmark Data

Patients Identified or Available

100

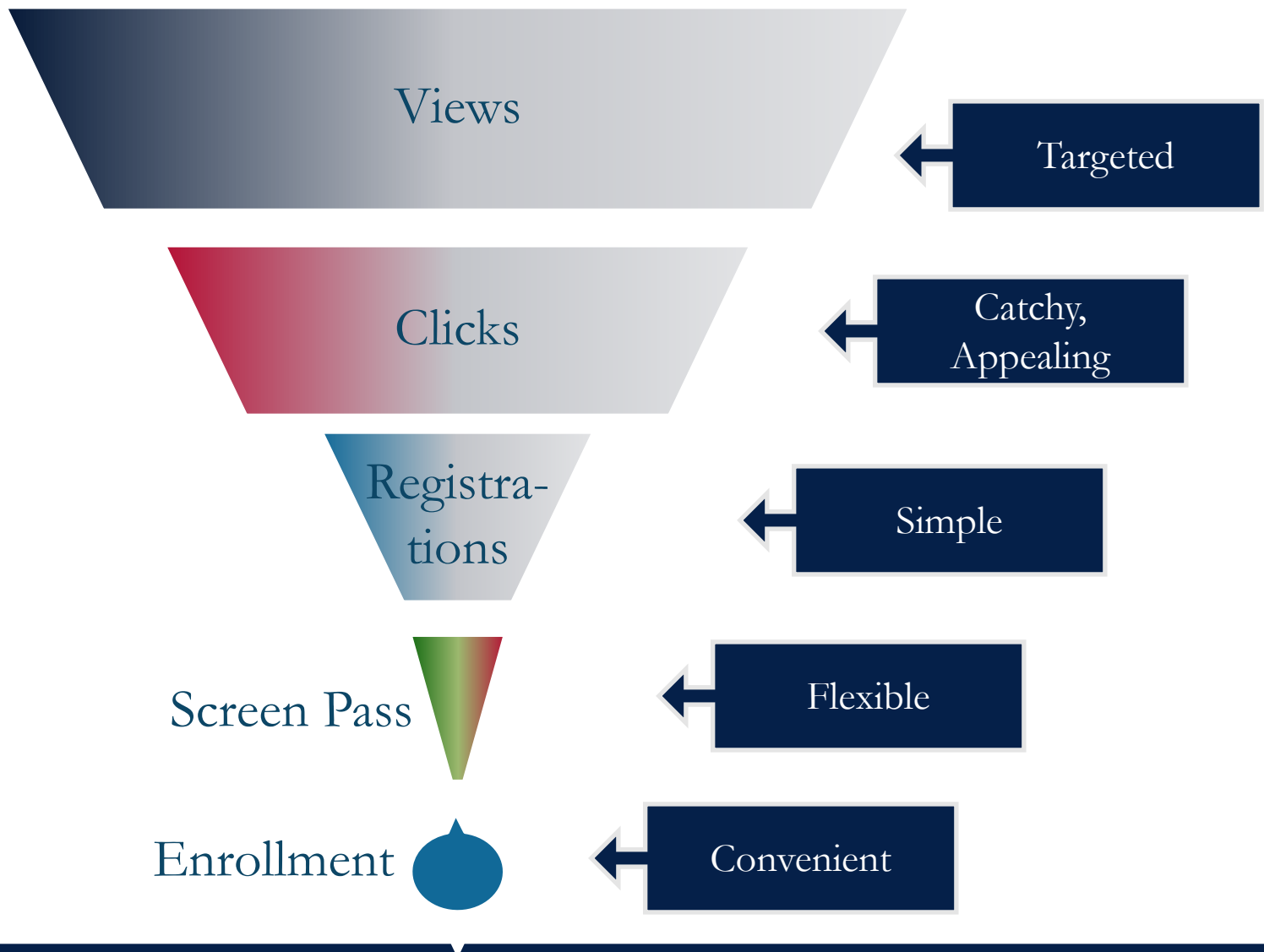
Overall Conversion Ratio:  
Identify 10 Patients to Randomize 1



Benchmark Data – CPP and PhESi-1998-2012



# Online Recruitment Funnel



# Measuring Impact of Recruitment

## Accrual Index

% of Target Enrolled

$$= \frac{(\text{Evaluable Subjects Enrolled}/\text{Accrual Target})}{(\text{Days since recruitment start}/30)/\text{Projected Time to Accrual(mos)}}$$

% of Time Elapse

How to interpret:  $\frac{2/3 \text{ accrued}}{2/3 \text{ time elapsed}} = 1.0$ ; on-time accrual

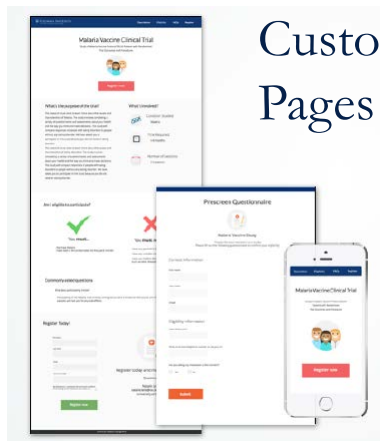


$\frac{1/4 \text{ accrued}}{1/2 \text{ time elapsed}} = 0.5$ ;  $< 1.0$  = behind



# TrialSpark Pilot

# TrialSpark Scope of Services



Custom-built Landing Pages



Comprehensive Trial Analytics

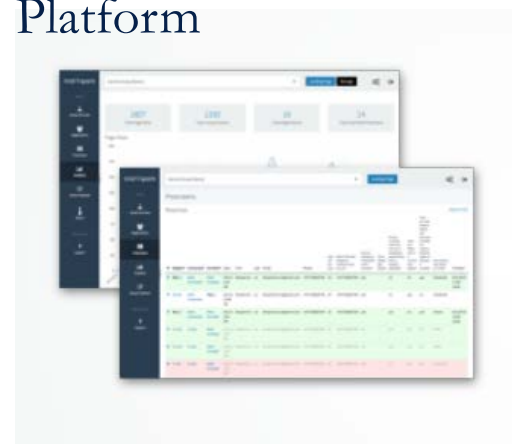
## Social Media Advertising Campaigns



## Participant Feedback and Engagement



## Recruitment Management Platform



# TrialSpark Pilot Awardees

naïve Projected Time  
to Accrual Completion

Study Name	Population	Target Enrolled	nPTAC	Currently Enrolled	Elapsed Time	Accrual Index
CURE	Women 21+ with UI	160	36 mo	58	17 mo	0.77 ↓
TRIUMPH	Women 65+ with UI	50	12 mo	0	TBD	NA
mMoon	Migraineurs 12-17 yrs	38	19 mo	14	15 mo	0.50 ↓
IUD	Women on Birth Control	15	12 mo	5	15 mo	0.20 ↓

# Participant Recruitment & Quality

Cost, Views, Clicks, Conversions

Study	Elapsed Time	Spent	Views	Clicks	Registrations	Eligible	Enrolled
CURE	2.3 mo	\$939	73,706	3,239 (2.0%)	135	24	3
TRIUMPH	3.5 mo	\$1315	24,120	2,325 (3.5%)	113	21	6
mMoon	5.7 mo	\$2123	70,477	4,636 (2.1%)	73	24	14
IUD	1.4 mo	\$988	57,885	3,545 (3.5%)	540	16	10

**2%-3.5%  
Response  
Rate**

# Impact of TrialSpark Recruitment

Accrual Index Pre and Post Trial Spark

	Pre-TS Accrual Index	Post-TS Accrual Index	Both Strategies
CURE	0.77 ↓	0.29 ↓	1.06 ↑
TRIUMPH	NA	0.41 ↓	NA
mMoon	0.50 ↓	1.23 ↑	1.69 ↑
IUD	0.20 ↓	5.71 ↑	2.93 ↑

# Affordability

## Projected Online Budget to Reach Target Enrollment Using TrialSpark

Study	Cost per Enrolled	Targeted/ Projected Monthly Enrollment	Estimated Monthly Cost to Reach Target	Annual On-line Budget	Year 1 Costs including TrialSpark Start-up (one-time \$3K) and Maintenance Services for 1 year
CURE	\$157	x 4.5	= \$706.5	x 12 = \$8,478	+ \$9K = \$17,478
TRIUMPH	\$219	4.2	\$920	\$11,038	\$20,038
mMoon	\$152	2	\$304	\$3,648	\$12,648
IUD	\$197	1.25	\$246	\$2,955	\$11,955



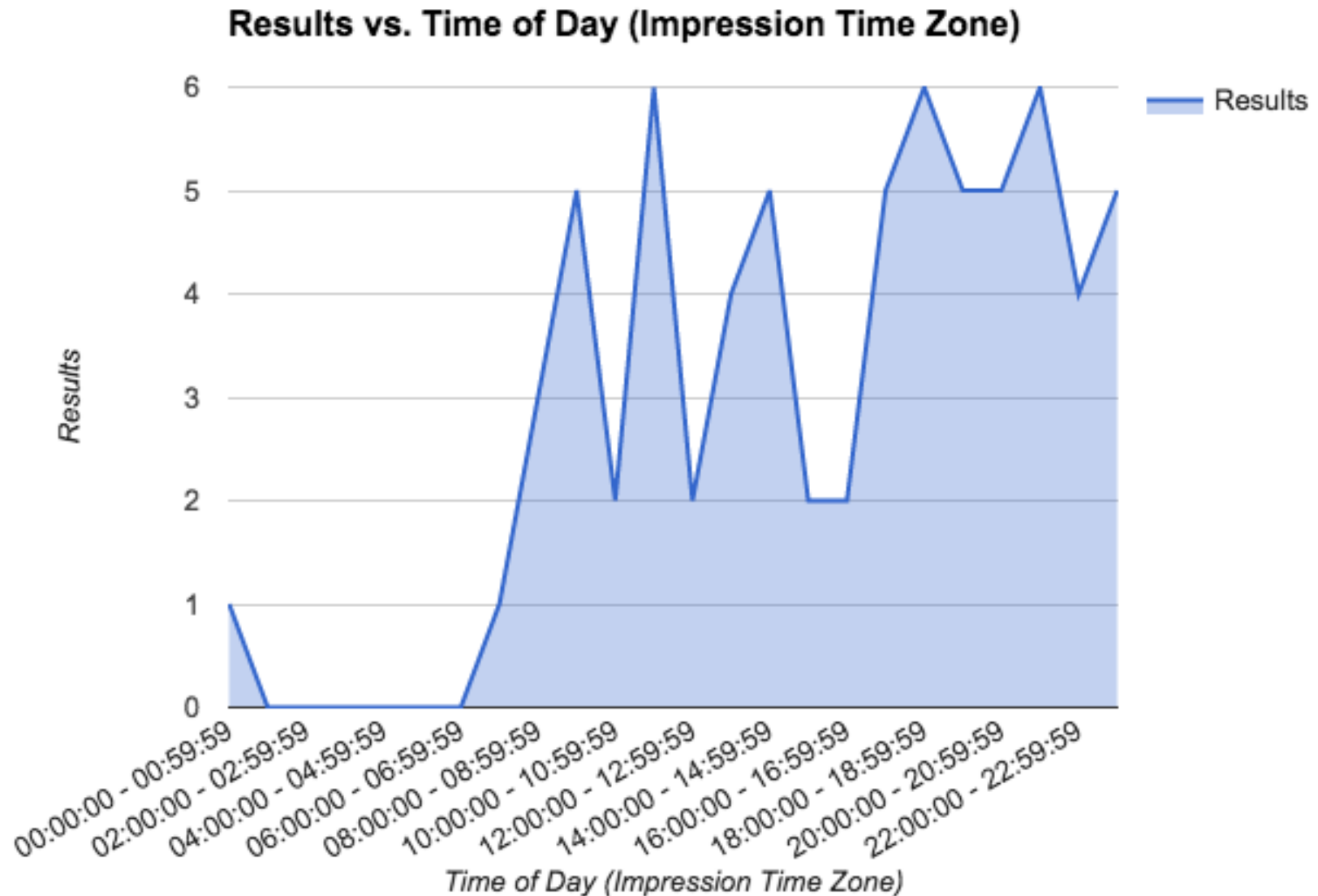
# Reaching Older Populations

## CURE 18-65 and TRIUMPH 65+ Study Conversions by Age

Age	Registrations	Reach	Cost per Result (USD)	Amount Spent (USD)	P-value for Fisher test comparing conversion rate with 55-64 group
13-17	0	2	\$0.00	\$0.00	1.000
18-24	8	10475	\$10.28	\$82.25	0.002
25-34	16	19567	\$10.87	\$173.85	0.001
35-44	11	12099	\$11.77	\$129.44	0.003
45-54	9	7568	\$10.75	\$96.79	0.041
<b>55-64</b>	<b>16</b>	<b>5635</b>	<b>\$5.44</b>	<b>\$87.09</b>	--

<b>65+</b>	<b>113</b>	<b>24,120</b>	<b>\$11.64</b>	<b>\$1,315.36</b>	
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# When do participants register?



# User Perception of Impact of TrialSpark Services on Recruitment

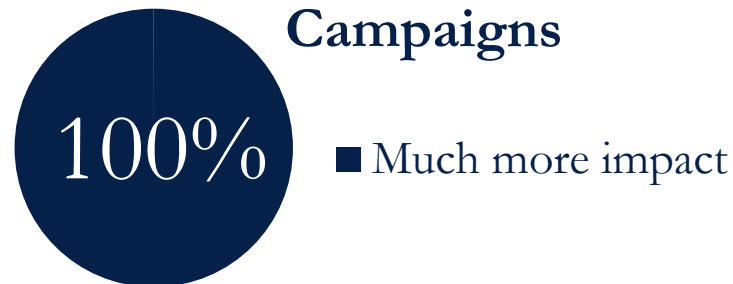
**Overall Impact of TrialSpark on Recruitment**



**Impact of TrialSpark Recruitment Management System**

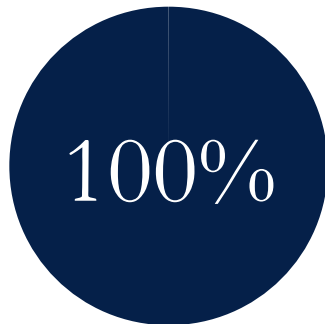


**Impact of Targeted and Data-Driven Advertising Campaigns**



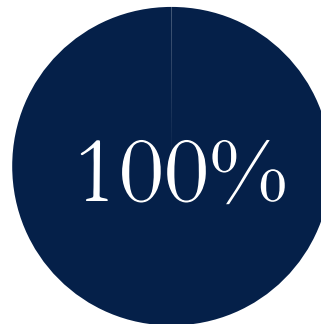
# User Satisfaction

Overall, how satisfied are you with TrialSpark?



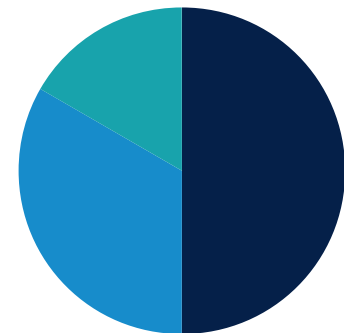
■ Very satisfied

..working with TrialSpark to build landing page?



■ Very satisfied

Will you use TrialSpark again?

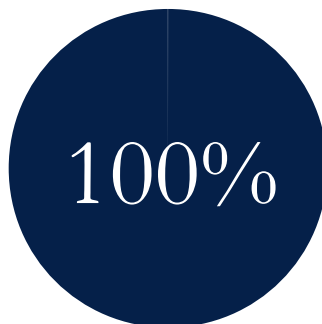


■ Definitely yes

■ Probably yes

■ Might or might not

...level of customization?



■ Very satisfied

...usability of data management system?



■ Very satisfied

Service fee was stated as a potential barrier

# Recommendations

Refer CS clients to TrialSpark who would be a good fit.

- ☐ Plan to recruit from the general public
- ☐ Annual recruitment budget of at least \$15K
- ☐ Do not have staff resources to build a website, create Facebook ads and/or track success of these ads

Encourage TrialSpark to develop a “pilot” funding band. Studies would qualify if they have

- ☐ Limited funding (<\$60,000)
- ☐ Sample size < 50
- ☐ plans to use the results to apply for a larger grant

[clinicaltrials.ucsf.edu](https://clinicaltrials.ucsf.edu) and  
[profiles.ucsf.edu](https://profiles.ucsf.edu)

# UCSF needed a better “condition-agnostic” trial finder

- No comprehensive nor easy way to see the entire landscape of clinical studies
- Studies are shown across multiple sites
- Hard for the public to find, assess, and engage
- Hard for researchers to find partners

# Three goals for the current UCSF project:

1. Create patient-friendly site of UCSF trials, focused on those that are open to enroll
2. Design for efficiency and re-use
3. Cross link with UCSF Profiles and UCSF Medical Center



# Current status

- Internal launch
- Quick Demo

UCSF Clinical Trials beta

[Give us feedback on this beta site](#) [Search](#) [Browse](#) [Pediatric](#) [About](#)

UCSF Clinical Trials > Skin Cancer/Melanoma Trials > This trial





## A Phase 1 Study of AM0010 in Patients With Advanced Solid Tumors


a study on Skin Cancer/Melanoma, Prostate Cancer, Ovarian Cancer, Renal Cell Carcinoma, Colorectal Carcinoma, Pancreatic Cancer, Lung Cancer, Solid Tumor, Breast Cancer

[I'm interested!](#)  
[Print info for my doctor](#)

[Twitter](#) [Facebook](#) [Email](#)

[Summary](#)  
[Eligibility](#)  
[Location](#)  
[Details](#)

 for people ages 18 years and up  
 at San Francisco, California and other locations  
 study started November 1, 2013  
estimated completion: December 1, 2016  
 [W. Korn](#)

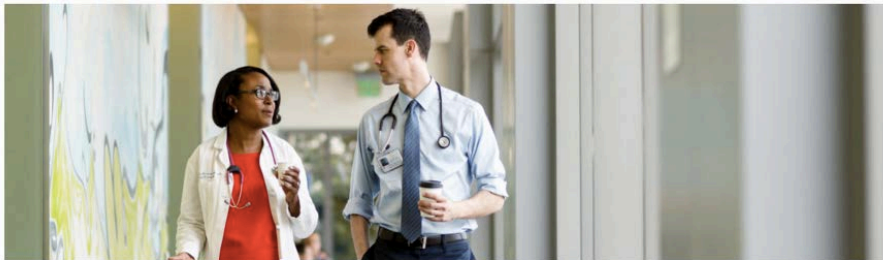
  
W. Korn

UCSF University of California San Francisco

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## UCSF Clinical Trials beta

[Give us feedback on this beta site](#) [Search](#) [Browse](#) [Pediatric](#) [About](#)



**Search Trials**  [Q](#)

explore 1384 trials at UCSF, including [depression](#), [prostate cancer](#), [infertility](#), and more

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From Nobel Prize winners to up-and-comers

**How Clinical Trials Work**

What are clinical trials? Why should you join?

**What to Expect**

Interested in joining? Here's what it might be like

**Who Participates**

How to tell if you qualify for a clinical trial

UCSF Profiles


search, discover, network

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[Q](#)

Sign in to see private stats on your profile page — or add photo, interests, videos, mentoring, etc.

## Michael Korn, MD



Title Professor  
School UCSF School of Medicine  
Department Medicine  
Address 2340 Sutter Street  
San Francisco CA 94115  
Phone 415-602-2844  
vCard [Download vCard](#)

[Education and Training](#) [Overview](#) [Websites](#) [Clinical Trials](#) [Global Health](#) [Publications](#)

### Education and Training

Heinrich-Heine University of Duesseldorf M.D. School of Medicine 1988

### Overview

Dr. Korn's is an expert on gastrointestinal cancers, with focus on esophageal, gastric, and pancreatic, and colon cancers. He initiated and chairs the UCSF Molecular Tumor Board and has a strong clinical as well as research interest in precision oncology. He is principal investigator on clinical trials of novel anti-cancer agents as part of the Phase-I Clinical Trials program and leads trials in esophageal and gastric cancers. Dr. Korn's laboratory research focuses on systems biology and computational models of signal transduction in cancer, as well as design of rational combination therapies targeting receptor tyrosine kinase signaling, and the MAPK and PI3K pathways.

### Websites

[Clinical Profile at UCSF Medical Center](#)  
[Profile at UCSF Cancer Center](#)

### Clinical Trials

★ **FEATURED:** A Randomized, Active-Controlled, Partially Blinded, Biomarker Select, Phase III Clinical Trial of Pembrolizumab as Monotherapy and in Combination With Cisplatin+5-Fluorouracil Versus Placebo+Cisplatin+5-Fluorouracil as First-Line Treatment in Subjects With Advanced Gastric or Gastroesophageal Junction (GEJ) Adenocarcinoma

Start Date: July 2015  
Condition: Gastric Adenocarcinoma  
Status: Recruiting

### Michael's Networks

#### Related Concepts

Derived automatically from this person's publications.

Mitogen-Activated Protein Kinase Kinases  
Pancreatic Neoplasms  
Adenoviridae  
Receptors, Virus  
Phosphatidylinositol 3-Kinases

See all (243) concept(s)

#### Co-Authors

People in Profiles who have published with this person.

Ferrell, Linda  
Ko, Andrew  
Kelley, Katie  
Venook, Alan  
Tempero, Margaret

See all (43) people

#### External Co-Authors

People at other institutions who have published with this person.

Heldi Feller  
Paul Spellman  
Joe Gray

See all (4) people

#### Related Authors

People who share related concepts with this person.

Ko, Andrew  
McCormick, Frank  
Venook, Alan  
Tempero, Margaret  
Granda, Jennifer

See all (60) people

UCSF | chatter

# Approach to the project

- Technical
  - Automate whenever possible
  - Re-usable code
- Social
  - Make friends and establish partnerships
  - Use multi-channel communications
- Financial
  - Obtain enterprise support

# Technical: a bit of detail on implementation

- Data – digesting, validating, smart usage
- User Interface – helping users find trials, take action
- Optimization for search - google rules the internet

# Technical: Data

- Reliance initially on [clinicaltrials.gov](https://clinicaltrials.gov) data
- Validation and correction of data with outreach
- Logic applied for completeness
- Designed so that other centers, institutes, labs and departments can re-use the data
- Cross-linked with UCSF Profiles and trials listed on pages

# Technical: User Centered Design

- Sophisticated search features
- Clear actions
- Targeted ancillary links

# Social: Partnerships

Worked across enterprise to garner support, input, expertise

**UCSF Medical Center**

UCSF Memory and Aging Center

**UC BRAID**  
innovation•collaboration•acceleration

**UCSF** University of California, San Francisco

Executive Vice Chancellor & Provost

**UCSF** SCHOOL OF MEDICINE  
DEPARTMENT OF PEDIATRICS

**UCSF** Office of Ethics  
and Compliance  
Human Research  
Protection Program

UCSF Department of Radiology  
& Biomedical Imaging

**BreastCancerTrials.org**  
*find a trial that's right for you*

**UCSF** School of  
Medicine

**UCSF** Helen Diller Family  
Comprehensive  
Cancer Center

**UCSF** Information  
Technology

**CVP**  
Center for Vulnerable Populations at SFGH  
Department of Medicine

University Relations

# Social: Communications

Promote trial finder to the community with a Communications Strategy that includes:

- Partners
- Researchers and research community at UCSF
- Public

# Financial: Enterprise support

- Presented the project early on to enterprise-wide IT Governance Committee
- Proposed a 50/50 cost share and got it!
- Exposure helped garner support across the institution resulting in great partnerships





# What's next?

- Public launch of Trial Finder soon
- Many ideas to extend functionality and data
  - Integrate with TrialSpark?
  - Use data from EMR to recommend studies
  - Translation including from scientific to lay English
  - Machine learning for categorization, synonyms, etc.
  - And more...
- Awarded NIH Network Capacity Admin Supplement to extend model across UC Health campuses



# A few more initiatives

- Joint IRB/CTSI Seminar: New Approaches for Participant Recruitment: What's Hot (and What's Not)
  - Heavy interest from CRC and faculty
  - ~100 attendees
  - Recorded! Watch it here: <http://tinyurl.com/UCSF-PR-seminar2016>
- Short educational videos to allow deeper dive on certain topics
  - Mistakes to avoid in recruitment
  - Principles of communications
  - How to recruit ethically



# Longer term plans

Plan to submit a proposal for NIH Collaborative Innovation Award (CIA) in early 2017 focused on Participant Recruitment

- Led by Vanessa Jacoby MD, Director of Participant Recruitment Program at UCSF CTSI
- In collaboration with UCs and CTSAs

# Opportunities to collaborate now and later?

Lots!! Join a breakout session and/or get in touch  
(and we will be in touch!)

leslie.yuan@ucsf.edu - CTSI CIO & Dir of Research Technology Program

jennifer.creasman@ucsf.edu - CTSI Dir of Data Management

melissa.telli@ucsf.edu - CTSI Dir of Communications

vanessa.jacoby@ucsf.edu - CTSI Faculty Director, Participant Recruitment Program