CCSS
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Childhood Cancer Survivor Study (U24 CA55727)

Report of the
Coordinating Center
Greg Armstrong, M.D.

CCSS Investigator Meeting
Williamsburg, VA
June 9-10, 2010

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Childhood Cancer Survivor Study (U24 CA55727)

Cohort History (page 13)

Follow-up 2000
(FU#1) 02/1/00 – 12/10/02

Follow-up 2005
(FU#3) 04/09/05 – 11/15/06

Follow-up 2013

Baseline
10/29/92 – 12/10/02

Follow-up 2003
(FU#2) 11/06/02 – 04/25/05

Follow-up 2007
(FU#4) 07/13/07 – 11/1/09

Expansion 9/1/2007 - Present

Buccal Cell Collection
Initial 09/08/98 – 01/10/06

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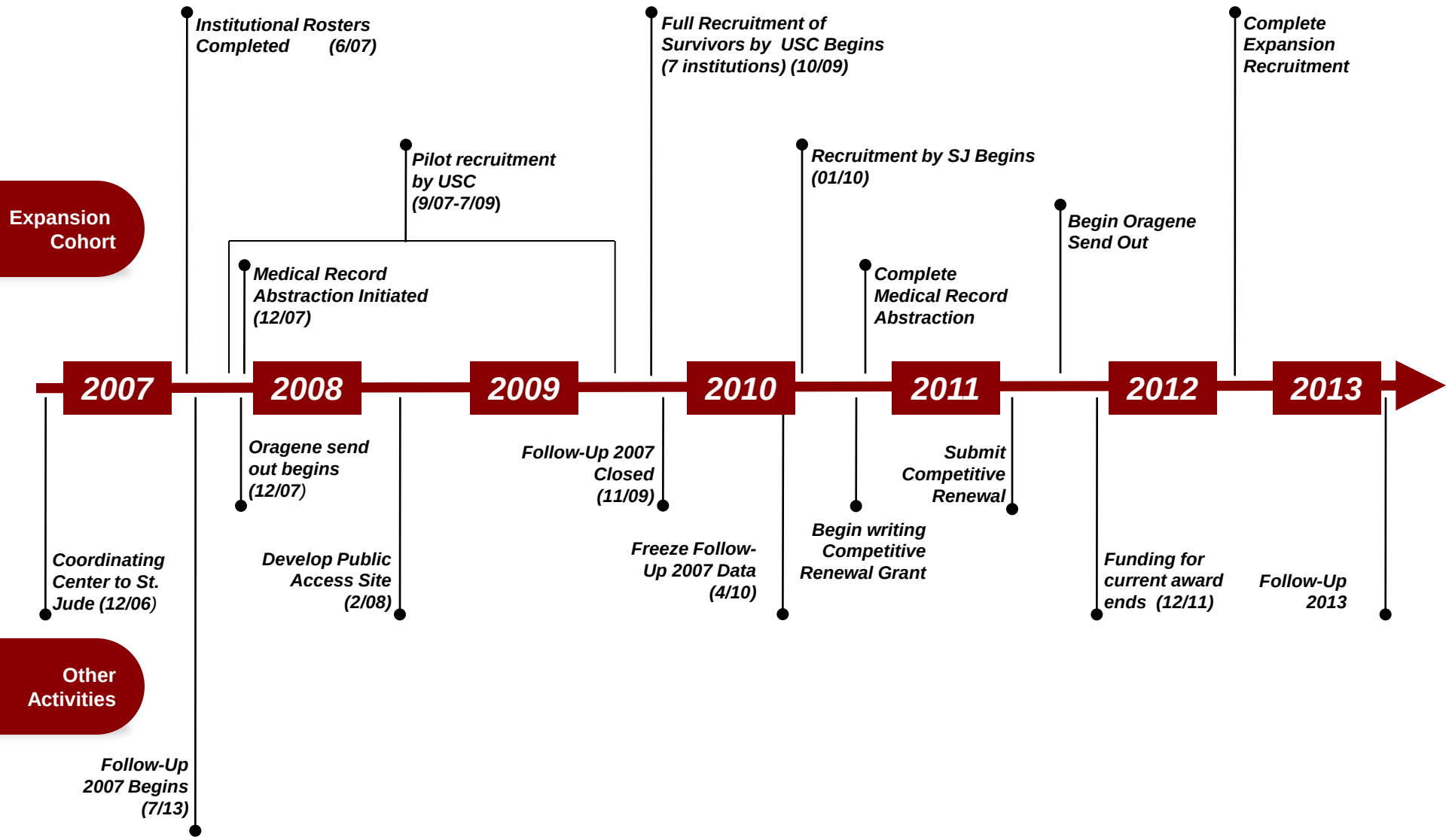
Coordinating Center Timeline (page 14)



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Follow-up 2007

- Comprehensive update of baseline data
  - 28 pages
  - 10,143 eligible participants, 3,065 siblings
  - Update: demographics, medical care, chronic medical conditions, health habits, SMNs, pregnancy/offspring, additional chemo/RT

- Timeline
  - Initial send out: July 2007-April 2008
  - Follow-up complete: October 2009
  - Data freeze: June 2010

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Participation Rates: Baseline and Follow-up Studies (page 15)

Eligible *n* = 20,276

Lost to follow-up *n* = 2,996

↓

Contacted for baseline *n* = 17,280

Questionnaire	Number of Pages	Presumed Eligible	Participation Rate	Non-Response	Refused Questionnaire	Dropout of Study	Lost to Follow-Up
Baseline	**20**	**n = 17,280**					
Follow-Up 2000	**16**	**n = 12,884**					
Follow-Up 2003	**24**	**n = 11,859**					
Follow-Up 2005	**4**	**n = 11,393**					
Follow-Up 2007	**28**	**n = 10,143**					
		(9,769 sent)					

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Baseline	**20**	**n = 17,280**	**83%**	**0%**	**17%**	**0%**	**0%**
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Baseline	**20**	**n = 17,280**	**83%**	**0%**	**17%**	**0%**	**0%**
Follow-Up 2000	**16**	**n = 12,884**	**81%**	**6%**	**2%**	**4%**	**7%**
Follow-Up 2003	**24**	**n = 11,859**	**78%**	**8%**	**3%**	**5%**	**6%**
Follow-Up 2005	**4**	**n = 11,393**	**78%**	**5%**	**1%**	**3%**	**13%**
Follow-Up 2007	**28**	**n = 10,143**					
		(9,769 sent)					

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Follow-Up 2003	**24**	**n = 11,859**	**78%**	**8%**	**3%**	**5%**	**6%**
Follow-Up 2005	**4**	**n = 11,393**	**78%**	**5%**	**1%**	**3%**	**13%**
Follow-Up 2007	**28**	**n = 10,143**	**79%**	**8.7%**	**2.4%**	**1.6%**	**5.1%**
		(9,769 sent)	**(82%)**				

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Follow-up 2007: Participation (p.16)

Number Sent	Survivors (*n* = 9,769)			Siblings (*n* = 3,065)		
	n	*% of Sent*	*% Completed*	*n*	*% of Sent*	*% Completed*
Total Completed	**8,015**	**82.0%**		**2,378**	**77.6%**	
Passive Non-Responder	**887**	**9.1%**		**485**	**15.8%**	
Active Refusals	**248**	**2.5%**		**82**	**2.7%**	
Refused Further Contact	**162**	**1.7%**		**73**	**2.4%**	
Lost to Follow-up	**516**	**5.3%**		**113**	**3.7%**	
Deceased	**113**	**1.2%**		**14**	**0.5%**	
	Survey Period: 7/07 - 9/09			**Survey Period: 7/08 - 10/09**		

***Note: online option not available until 6/1/2008**

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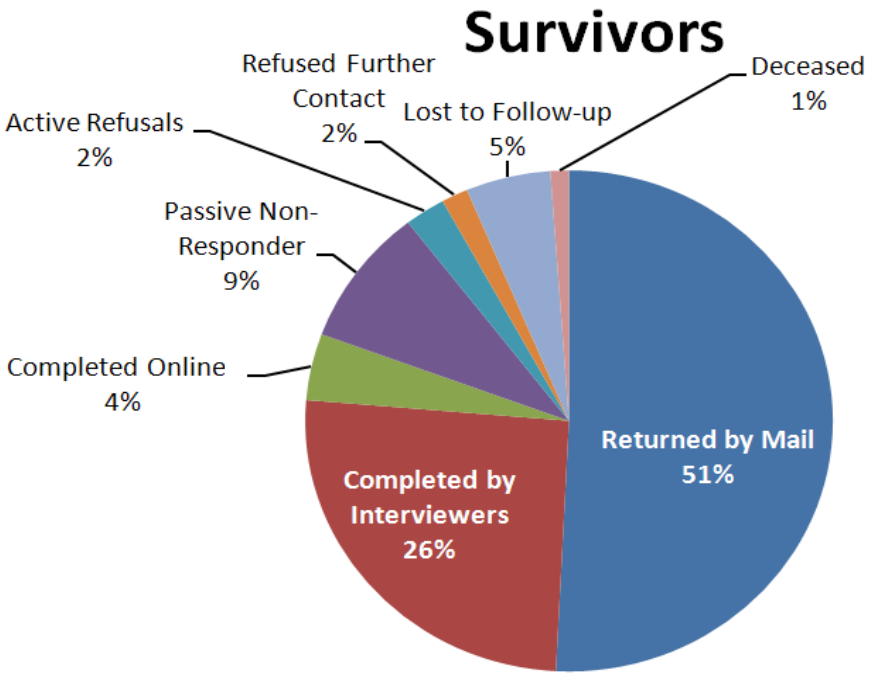
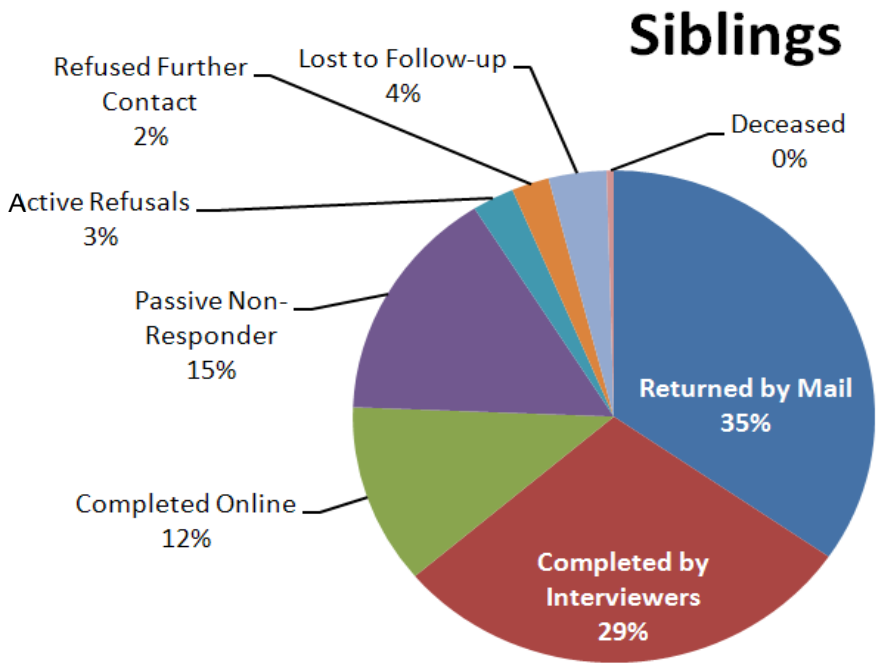
Follow-up 2007 Participation





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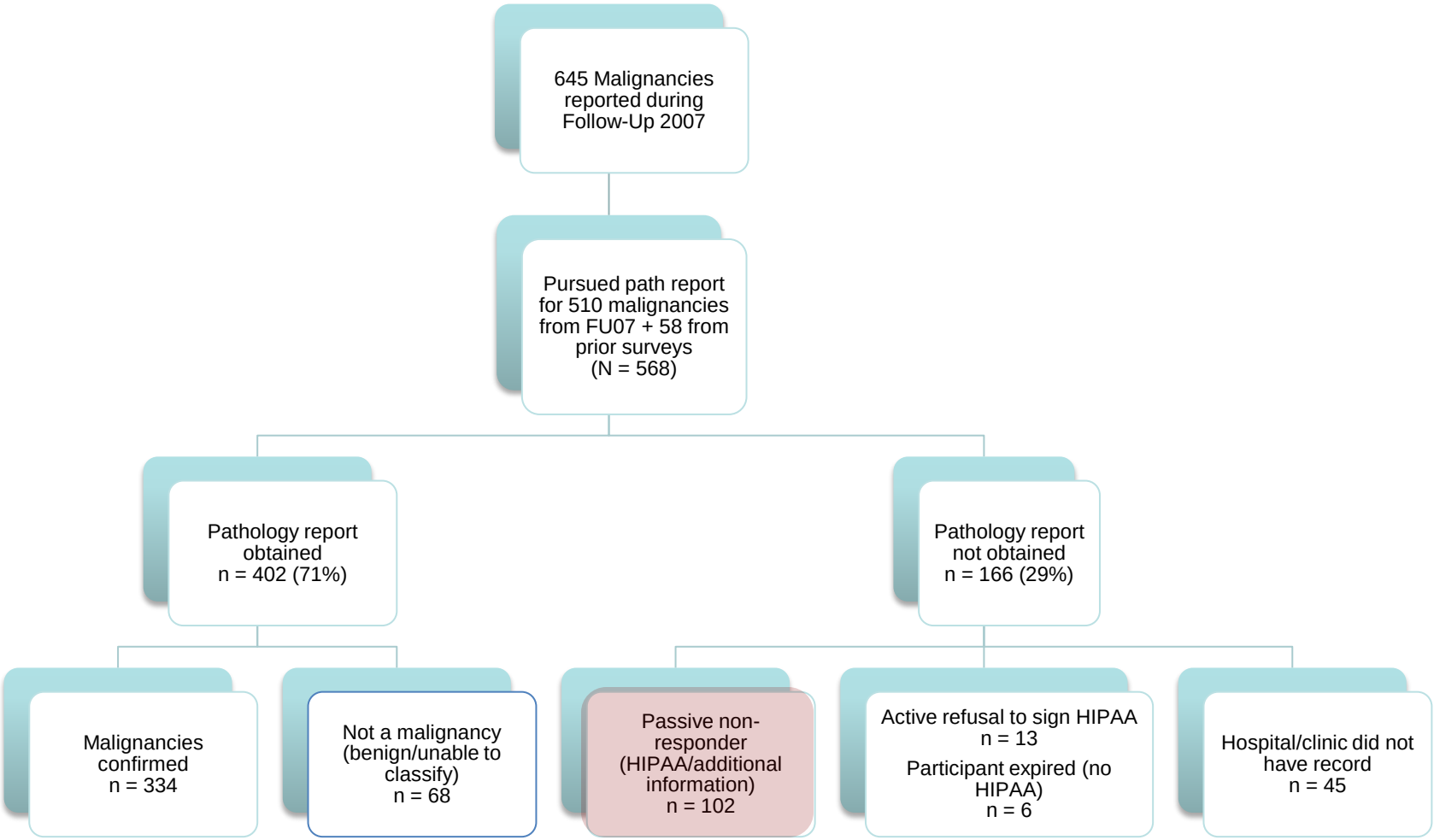
SMN Confirmation Status (p. 22)



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Men's Health Questionnaire

- Puberty, sexual development, infertility and QOL in male survivors
- LAF funded, Lillian Meacham PI
- Timeline: May 2008 – Oct. 2009
  - 16 pages
  - 4,001 eligible males (completing FU 2007)
- Methods
  - Sent to males who agreed to receive survey
  - 1 mail out, phone follow-up reminder

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Men's Health Questionnaire

10/12/2007 04:14:27 PM

LTFU
Long-Term Follow-Up Study

Men's Health Questionnaire

St. Jude Children's Research Hospital
Children's Healthcare of Atlanta/Emory University
Children's Hospital at Stanford
Children's Hospital of Columbus
Children's Hospital of Orange County
Children's Hospital of Philadelphia
Children's Hospital of Los Angeles
Children's Hospital of Pittsburgh
Children's Hospitals & Clinics of Minnesota, Minneapolis and St. Paul
Children's Medical Center of Dallas
Children's National Medical Center
City of Hope National Medical Center
Dana-Farber Cancer Institute
Loma Linda University
Mattel Children's Hospital at UCLA
Mayo Clinic
Memorial Sloan-Kettering Cancer Center
Miller Children's Hospital
Riley Hospital for Children - Indiana University
Roswell Park Cancer Institute
Seattle Children's Hospital & Medical Center
St. Louis Children's Hospital
Texas Children's Hospital
The Denver Children's Hospital
Toronto Hospital for Sick Children
UAB/The Children's Hospital of Alabama
University of California at San Francisco
University of Michigan - Mott Children's Hospital
University of Minnesota
U.T.M.D. Anderson Cancer Center

Our mailing address is:
Long-Term Follow-Up Study
St. Jude Children's Research Hospital
Department of Epidemiology
Mail Stop 735
332 N. Lauderdale St.
Memphis, TN 38105-2794

Toll-free phone number:
1-800-775-2167

e-mail: LTFU@stjude.org

The LTFU Men's Health Study is funded by

LIVESTRONG
LANCE ARMSTRONG FOUNDATION

Puberty, sexual development, infertility, and quality of life are important areas to study and understand in young adult survivors of pediatric cancer and other childhood illnesses. In a survey we sent you previously, you indicated your interest in participating in a study with this subject matter. Questions like these have already been asked of the female cancer survivors in the LTFU cohort. Important findings came from the female health questionnaire - for example the risk of premature menopause in female survivors of pediatric cancer and other childhood illnesses. This finding has been used to change clinical practice and counseling to female survivors of pediatric cancer and other childhood illnesses.

So, now it is your turn to teach us more about the health of male survivors of pediatric cancer and other childhood illnesses. Participation in this aspect of the study involves answering a series of questions that will take approximately 30 minutes to complete. You may feel these questions are very personal. Please be reassured your responses will remain confidential. We appreciate your willingness to answer this questionnaire.

Sincerely,

The LTFU study staff

Today's date: ☐☐ / ☐☐ / 2 0 0 ☐

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Men's Health Questionnaire (p.17)

	Survivors			Siblings		
Males Completing FU2007	**4,001**			**1,083**		
Answered "Yes" or" Unsure" to MHQ	***2961 (74%)***			***723 (66.8%)***		
	n	***% Sent***	***% Completed***	***n***	***% Sent***	***% Completed***
Total Completed	**1,602**	**54.1%**		**272**	**37.6%**	
Passive Non-Responder	**1,279**	**43.2%**		**434**	**60.0%**	
Active Refusals	**36**	**1.2%**		**10**	**1.4%**	
Refused Further Contact	**15**	**0.5%**		**2**	**0.3%**	
Lost to Follow-up	**33**	**1.1%**		**4**	**0.6%**	
Deceased	**6**	**0.2%**		**0**	**0.0%**	
	Survey Period: 5/08 - 10/09			**Survey Period: 1/09 - 10/09**		

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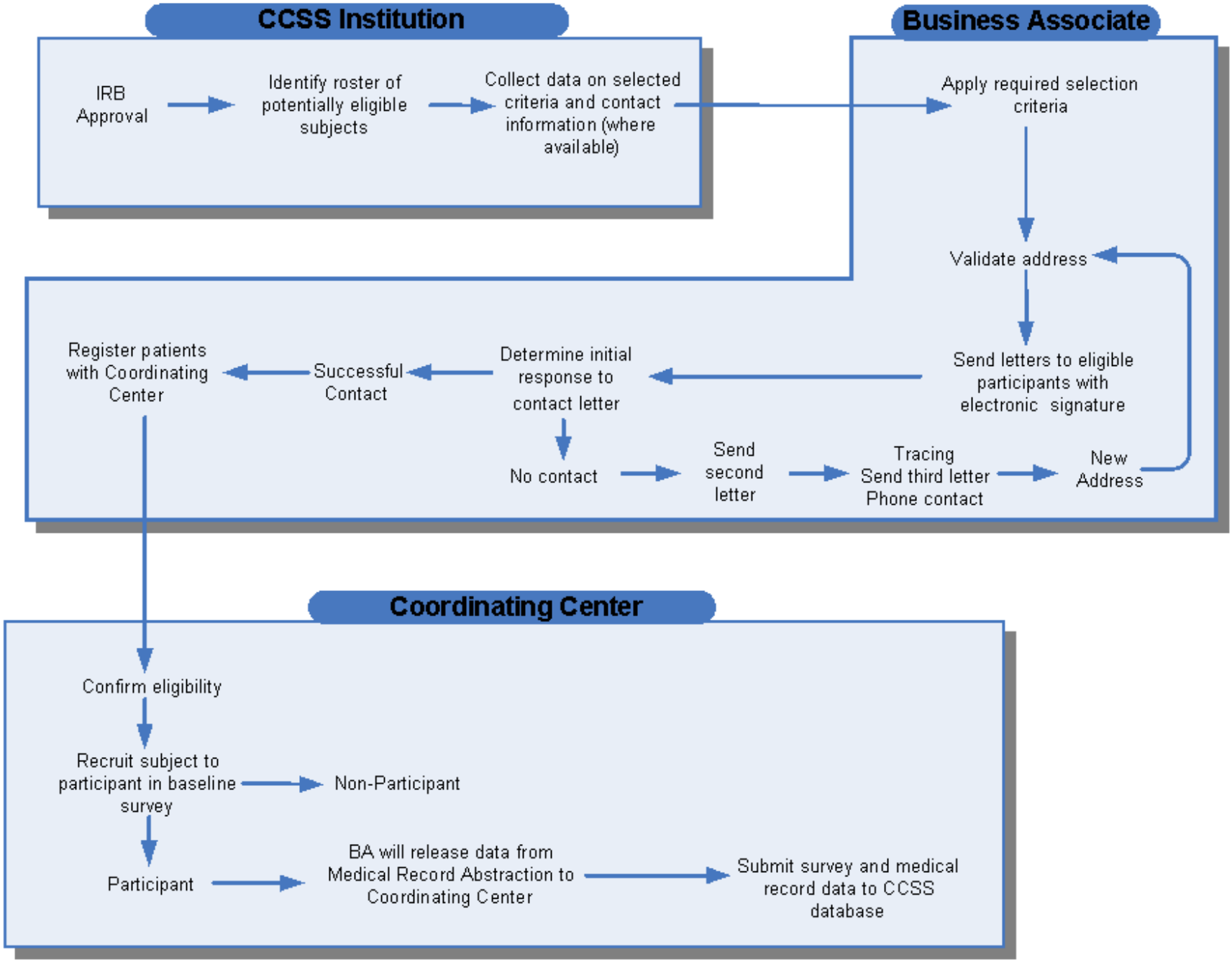
Cohort Expansion

- Diagnosed and treated 1987-99
  - Baseline survey based on original cohort baseline
- Recruitment
  - Privacy laws (HIPAA), new methods needed
  - USC as business associate
  - Pilot testing: Sept. 2007- July 2009


CCSS Institution
IRB Approval
Identify roster of potentially eligible subjects
Collect data on selected criteria and contact information (where available)
Business Associate
Apply required selection criteria
Validate address
Send letters to eligible participants with electronic signature
Determine initial response to contact letter
Successful Contact
Register patients with Coordinating Center
No contact
Send second letter
Tracing
Send third letter
Phone contact
New Address
Coordinating Center
Confirm eligibility
Recruit subject to participant in baseline survey
Non-Participant
Participant
BA will release data from Medical Record Abstraction to Coordinating Center
Submit survey and medical record data to CCSS database

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Recruitment: Pilot Study #1

- US Postal mail out (St. Jude only: n = 2,007)
  - Introductory letter from the PI
  - Brochure
  - HIPAA authorization form (paper only)
  - Stamped return envelope
  - $2 bill
  - Experian “pre-search” contact information

- HIPAAs Received: 39%
  - No difference by age (> or < 18 years)

- Key Questions:

  1) Are we getting the packet into the hands of the eligible participant???

  2) Is HIPAA a barrier to research?

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Pilot Studies: Overview

Into hands of eligible survivor?

NO

Need better contact information

Pilot II: Experian Pre-search + Phone follow-up

YES

Need improved method for recruitment

Pilot III: Web-based HIPAA

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Results

- Pilot II: Experian pre-search + limited phone follow-up (3 calls only)
  - Experian provides updated address for 28%
  - Calls to non-responders: 50% unreachable, those reached report interest
  - St Jude: 39% → 49%
  - Roswell Park: 46%

- Pilot III: Web-based HIPAA (2 institutions)
  - Arm I: original paper method → 26%
  - Arm II: web-based method → 22%
  - Arm III: web with sample survey → 19%

- Conclusion:
  - even minimal phone f/u is essential
  - Pre-search all
  - Offer all methods of HIPAA completion

- No *single* method change will assure adequate recruitment

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Pilot Studies: Overview

Into hands of eligible survivor?

NO

Need better contact information

Pilot II: Experian Pre-search + Phone follow-up

Pilot IV: FedEx w/ return notification

YES

Need improved method for recruitment

Pilot III: Web-based HIPAA

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Pilot IV: FedEx Return Notification

- Return notification (Emory, n = 802)
  - Experian pre-search (30% updated)
  - 3 attempts, including note on door
  - On-line notification to USC of delivery status

- Undeliverable
  - Arm 1: US postal service → 16%
  - Arm 2: FedEx → 33%

- HIPAA Response rate: No difference (10%)

- Conclusions:
  - Once in hand, FedEx does not improve response rate over USPS
  - *We are only reaching 2/3 of eligible survivors!!*

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Westat Tracing

Westat research services

-Improved search techniques: Lexus/Nexus

99 cases USC unable to reach

-26 cases with updated contact info

-5% return HIPAA

	Riley & UCSF (lost to follow-up)	Emory (FedEx Pilot)
Total	65	34
New address **&** Phone	2 (3%)	8 (24%)
New address **OR** Phone	7 (11%)	9 (26%)
New HIPAA	3 (5%)	2 (6%)

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Pilot Studies: Overview

Into hands of eligible survivor?

NO

Need better contact information

Pilot II: Experian Pre-search + Phone follow-up

Pilot IV: FedEx w/ return notification

YES

Need improved method for recruitment

Pilot III: Web-based HIPAA

Pilot V: The “Mini-surge”

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The "Mini-surge"

Day 0: Introductory mailing (with Experian pre-search) with paper and web-based HIPAA

↓

Day 7: Intensive phone follow-up/tracing

Day 14: Non-response mailing to all known addresses

↓

Day 35: Stop intensive phone follow-up

Results: UCSF (62%), Riley (59%)

Conclusions:

1) Intensive, multi-modal (paper, phone, web) recruitment needed
2) Upon contact, response is positive (<7% refusal rate)
3) Cost is high → $$$

USC: Complete recruitment of 9 institutions, began Oct. 2009 - ongoing

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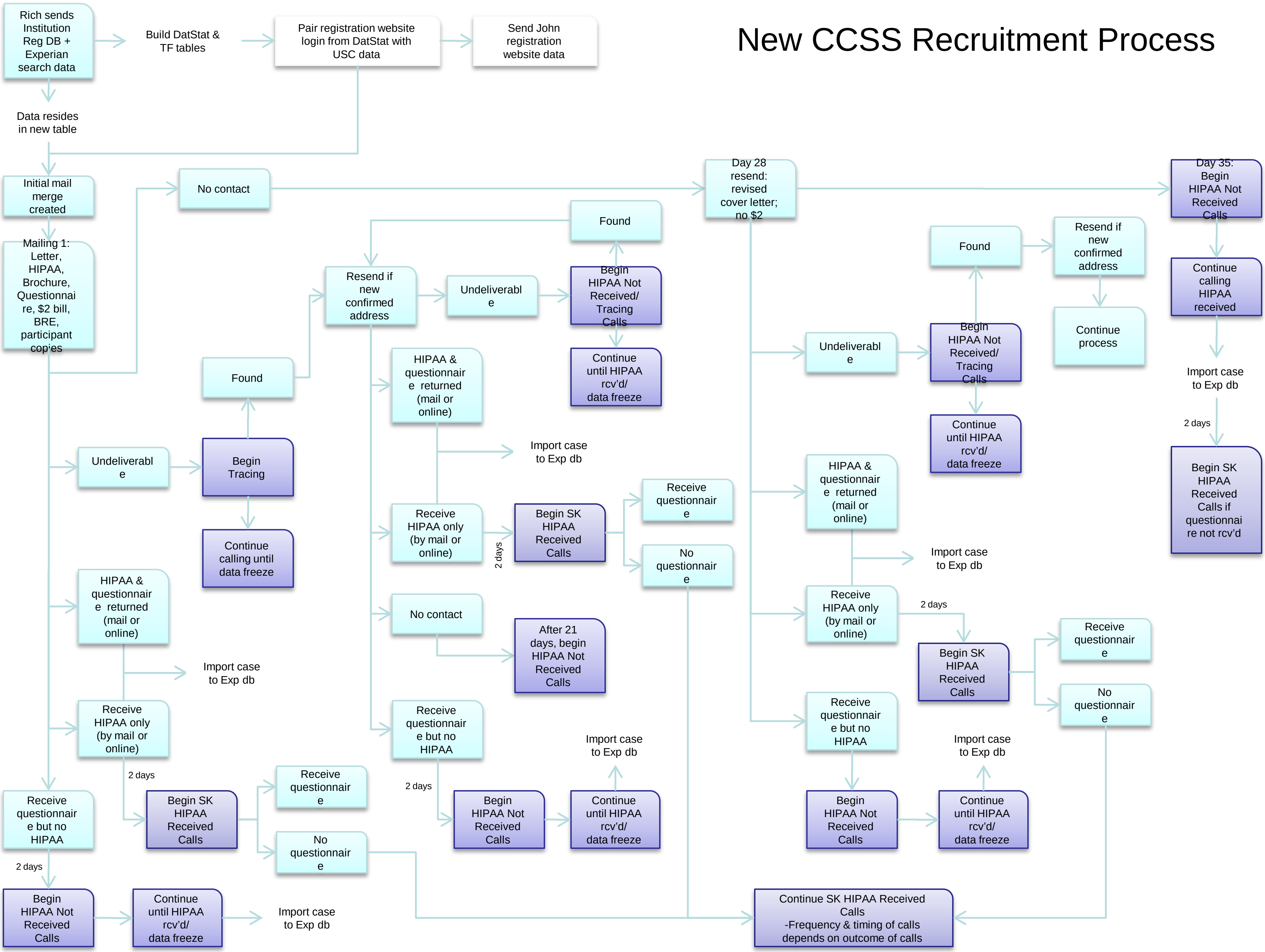
Direct Recruitment by St. Jude

- Amendment 9.0
  - BAA or waiver of HIPAA for SJ (not CCSS) to directly contact eligibles for HIPAA signature
  - Approved at 19 institutions
  - “Firewall” between St. Jude and CCSS
  - “One-step process”
- Recruitment
  - MSKCC – January 2010
  - CHOP and SJCRH – February 2010
  - Stanford and UAB – March 2010
  - Wash. U. (St. Louis) – April 2010
  - MD Anderson – May 2010

New CCSS Recruitment Process



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Recruitment by Institution (as of 5/5/10; page 18)

	Institution Name	Recruiting Institution	IRB Amendment 9.0 Approved*	Selected Eligible Patients	Recruitment Timing	# Signed HIPAAs rec'd as of 5/5/10
1	University of Minnesota	St. Jude	Yes	293	Summer 2010	
2	Denver Children's Hospital	St. Jude	Pending	603	Pending	
3	Children's Hospital of Pittsburgh	St. Jude	Yes	814	Summer 2010	
4	Children's Hospital at Stanford	St. Jude	Yes	375	Active	90
5	Dana Farber Cancer Institute	USC	No	932	Active	302
6	Children's Atlanta/ Emory University	USC	Yes	732	Active	288
7	Children's National Medical Center	St. Jude	Pending	442	Pending	
8	UTMD Anderson Cancer Center	St. Jude	Yes	654	Active	15
9	Memorial Sloan-Kettering Cancer Center	St. Jude	Yes	663	Active	228
11	University of California San Francisco	USC	No	519	Active	263
12	Seattle Children's Hospital	St. Jude	Yes	848	Summer 2010	
13	Toronto Hospital for Sick Children	St. Jude	Yes	1,704	Fall 2010	
15	St. Jude Children's Research Hospital	SJ/USC	Yes	2,155	Active	1206
16	Nationwide Children's Hospital	St. Jude	Yes	503	Summer 2010	
17	Roswell Park Cancer Institute	USC	No	242	Active	137
19	Children's Hospitals and Clinics of Minnesota	USC	Yes	592	Active	320
20	Children's Hospital of Philadelphia	St. Jude	Yes	1,019	Active	352
21	St. Louis Children's Hospital	St. Jude	Yes	427	Active	78
22	Children's Hospital of Los Angeles	St. Jude	Yes	757	Summer 2010	
23	UCLA Mattel Children's Hospital	St. Jude	Yes	67	Summer 2010	
24	Riley Hospital for Children	USC	Pending	889	Active	421
25	UAB/Children's Hospital of Alabama	St. Jude	Yes	366	Active	91
26	Univ of Michigan/Mott Children's Hospital	St. Jude	Pending	678	Summer 2010	
27	Children's Medical Center of Dallas	USC	Yes	660	Active	192
28	Texas Children's Hospital	St. Jude	Yes	633	Summer 2010	
29	City of Hope National Medical Center	St. Jude	Yes	135	Summer 2010	
	TOTAL			17,702		3,983

*Amendment 9.0 allows both St. Jude and USC to conduct recruitment activities

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Expansion: Baseline Survey Completion (page 10)

HIPAA's Received	3,983	
Questionnaires Sent	3,621	
Pending Send out	362	
Returned	2,961	82%

Alive	*n*	*% of Sent*
Number Sent	***3,451***	
Number Completed	2,866	83%

Deceased	*n*	*% of Sent*
Number Eligible	***170***	
Completed	95	55.9%

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MRAF Completion (page 20)

- As of May 2010
- >95% completion: 22 institutions
- Ongoing at 7 institutions
  - IRB delays
  - Completed on paper but not yet submitted on line


LTFU
Saliva Collection for Young Children
SPECIMEN BAG
ORAgene·DNA
Jiffylite
Sealed Air Corporation
LONG-TERM FOLLOW-UP STUDY
Why is this study being done?
What is involved in this study?

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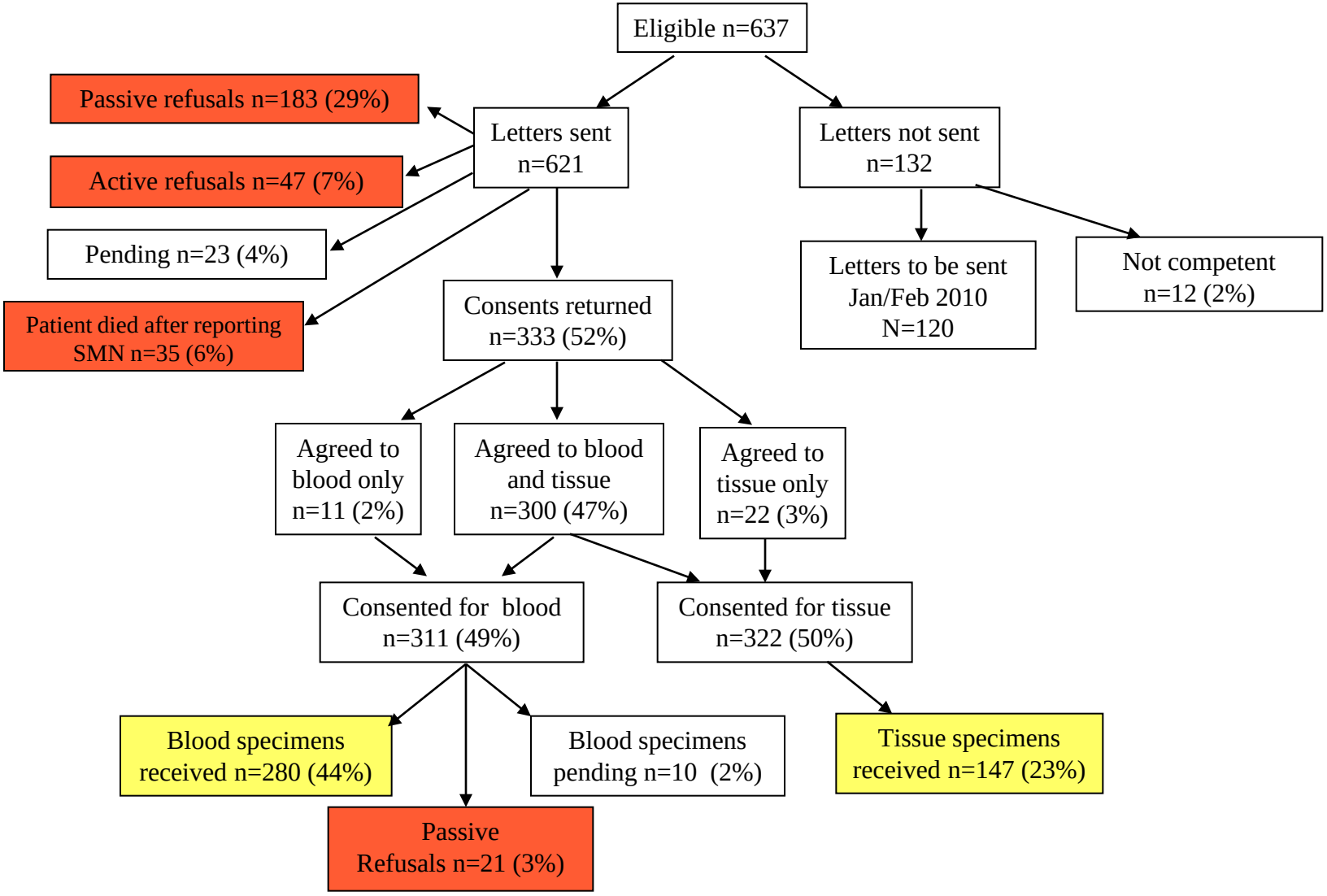
Oragene Collection: Original Cohort (page 21)

Kits Sent	Cases (n = 8,268)		Siblings (n = 2,710)	
	n	*% of Sent*	*n*	*% of Sent*
Returned	**3,066**	**37.1%**	**701**	**25.9%**
Refused	**308**	**3.7%**	**76**	**2.8%**
Pending	**4,659**	**56.3%**	**1,923**	**71.0%**
In Tracing	**109**	**1.3%**	**10**	**0.4%**
Deceased	**22**	**0.3%**	**0**	**0.0%**

Methodology Summary

- Send letter, consent form and kit to active participants.
- Trace non-current addresses. Resend kit if new address found.
- Call non-responders 3-weeks after kit mailing date.
- Call until contact or until reminder message is left.
- Resend kit upon participant request.
- Recruitment Intensification:
  - Call intensity increased in December 2009. Up to 10 calls per participant.
  - Mass resend to all non-responders will occur in January 2010.

Status of Blood and Tissue Specimens for Survivors Reporting a Subsequent Malignancy



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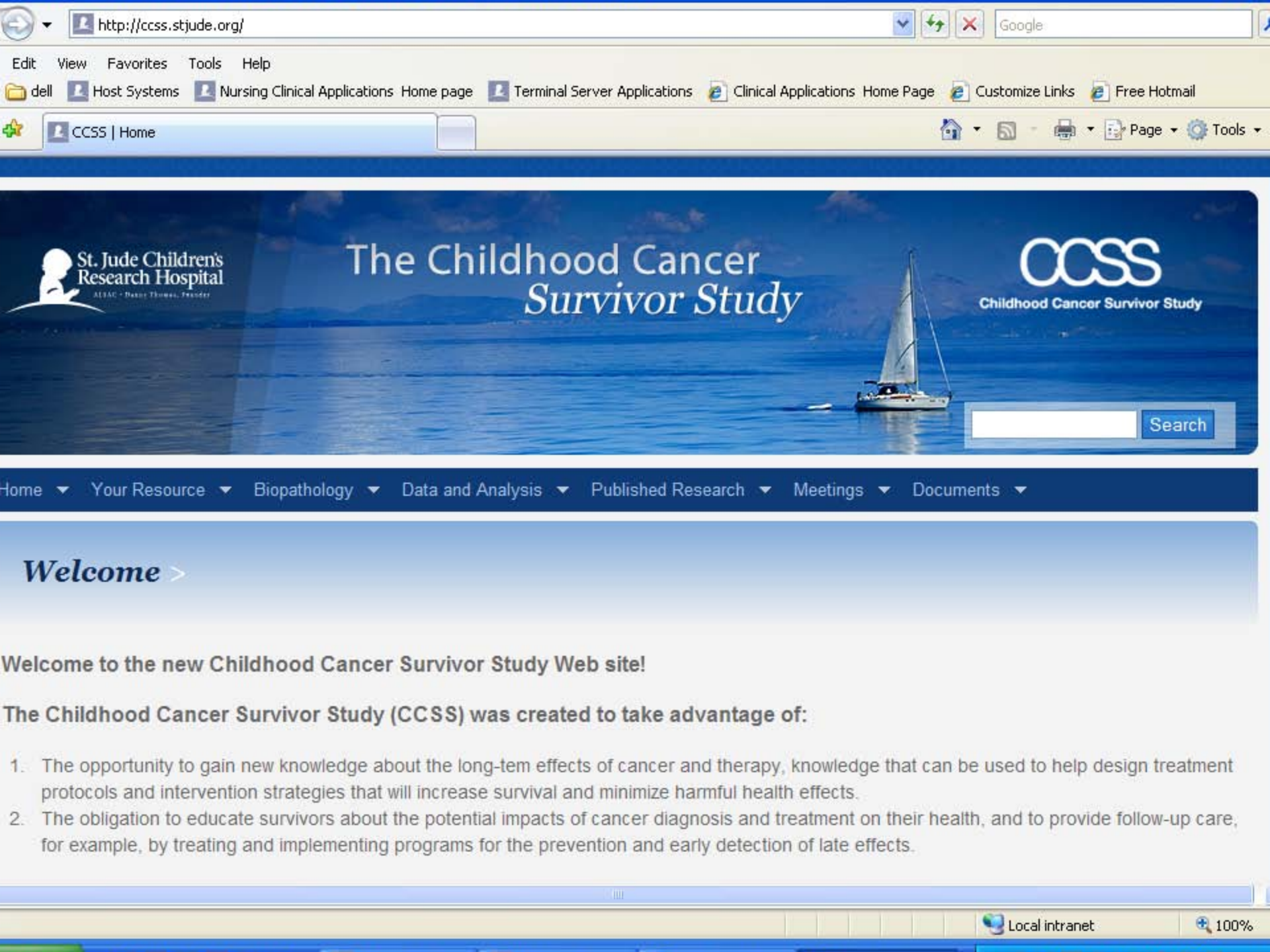
Blood & Tissue (page 23)

- Recruitment in process from FU2007
  - 264 new neoplasms with letters sent

- New summary tables of all biospecimens by primary diagnosis & by SMN diagnoses


http://ccss.stjude.org/
Google
Edit View Favorites Tools Help
dell Host Systems Nursing Clinical Applications Home page Terminal Server Applications Clinical Applications Home Page Customize Links Free Hotmail
CCSS | Home
Page Tools
St. Jude Children's Research Hospital
The Childhood Cancer Survivor Study
CCSS
Childhood Cancer Survivor Study
Search
Home Your Resource Biopathology Data and Analysis Published Research Meetings Documents
Welcome >
Welcome to the new Childhood Cancer Survivor Study Web site!
The Childhood Cancer Survivor Study (CCSS) was created to take advantage of:
1. The opportunity to gain new knowledge about the long-tem effects of cancer and therapy, knowledge that can be used to help design treatment protocols and intervention strategies that will increase survival and minimize harmful health effects.
2. The obligation to educate survivors about the potential impacts of cancer diagnosis and treatment on their health, and to provide follow-up care, for example, by treating and implementing programs for the prevention and early detection of late effects.
Local intranet
100%

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Website

- Separate CCSS & LTFU websites
- http://ccss.stjude.org/
- Approved concepts, ancillary studies, AOIs, publications & abstracts
  - All sort by column
  - New search feature
- Meeting information
- Public Access data tables
- “What’s new” link
- Easier to navigate!