Overview of ClinicalTrials.gov

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Director, ClinicalTrials.gov
National Library of Medicine

Outline

• Rationale for clinical trial registration and results reporting
• ClinicalTrials.gov background
• Basics of results reporting
• ClinicalTrials.gov review process
What’s All the Fuss About?

- Suppression of research results impedes the scientific process in all areas of science
- Suppression of clinical trial data is particularly problematic
  - Trials depend on human volunteers
  - Trial results inform our medical decisions

Three Key Problems

- Not all trials are published
- Publications do not always include all prespecified outcome measures
- Unacknowledged changes are made to the trial protocol that would affect the interpretation of the findings
  - e.g., changes to the prespecified outcome measures
Levels of “Transparency”

Reasons To Register Clinical Trials and Report Results

- Human Subject Protections
  - Allows potential participants to find studies
  - Assists ethical review boards and others in determining appropriateness of studies being reviewed (e.g., harms, benefits, redundancy)
  - Promotes fulfillment of ethical responsibility to human volunteers—research contributes to medical knowledge

- Research Integrity
  - Facilitates tracking of protocol changes
  - Increases transparency of research enterprise

- Evidence-Based Medicine
  - Facilitates tracking of studies and outcome measures
  - Allows for more complete identification of relevant studies

- Allocation of Resources
  - Promotes more efficient allocation of resources
ClinicalTrials.gov Background

History of ClinicalTrials.gov

- FDAMA* 113 (1997) mandates registry
  - Investigational New Drug application (IND) trials for serious and life-threatening diseases or conditions
- ClinicalTrials.gov launched in February 2000
- Calls for increased transparency of clinical trials
  - Maine State Law, State Attorneys General
- ClinicalTrials.gov accommodates other policies
- FDAAA† Section 801 (2007): Expands registry & adds results reporting requirements

* Food and Drug Administration Modernization Act of 1997
† Food and Drug Administration Amendments Act of 2007
ClinicalTrials.gov Records

- One record per trial
- Registration
  - Submitted at trial initiation
  - Summarizes information from trial protocol
  - Includes recruitment information (e.g., eligibility, locations)
- Results
  - Submitted after trial completion
  - Summarizes trial results

Protocol Information

- Descriptive Information
  - Study Type, Phase, Design, Outcomes, Enrollment, Start and Completion Dates
- Recruitment Information
  - Eligibility Criteria, Overall and Individual Site Recruitment Status
- Location and Contact Information
  - Sponsor and/or Responsible Party
  - Facility Name and Contact
- Administrative data
  - Protocol ID
  - IND/IDE Number (not public)
Results Information

- Participant Flow
- Baseline and Demographic Characteristics
- Primary and Secondary Outcomes
- Adverse Event information
- Other Information
  - “Certain Agreements” related to restrictions on results disclosure
  - Overall Limitations and Caveats
  - Results Point of Contact

Public Archive for Records

- Changes can and should be made to records
  - Estimated dates become “actual” dates
  - Estimated enrollment becomes “actual”
  - Other protocol changes
  - Overall recruitment status changes
  - Results may be added or changed
- All changes are publicly “tracked”
Trial Life Cycle

• Initial registration
• Updates, as necessary
  – Enrollment
  – Key dates
  – Recruitment status
  – Other protocol changes
• Initial results reporting
• Updates, as necessary

Key Policies and Laws
Overview of ClinicalTrials.gov

**Policies and Users**

- **FDAAA**
- **FDAMA 113**
- **BPCA**
- **Maine**
- **Recruitment** (e.g., patients, physicians)
- **Journal Editors**
- **Researchers & Funders**
- **Institutional Review Boards (IRBs)**
- **ClinicalTrials.gov**
- **Ottawa Statement**
- **World Health Organization (WHO)**
- **Health Policymakers**
- **ICMJE**

**FDAAA
Sec. 801. Expanded Clinical Trial Registry Data Bank**

- Enacted on September 27, 2007
- Requires trial registration
- Requires results reporting
- Added enforcement provisions
  - Notices of noncompliance
  - Civil monetary penalties (up to $10,000/day)
  - Withholding of NIH grant funds
Registration Policies

- ICMJE*
  - Interventional trials
    - All intervention types
  - All phases
- FDAAA†
  - Interventional trials
    - Drugs, biologics, devices
  - Not phase 1 drug or not small feasibility device
  - US FDA jurisdiction (e.g., IND/IDE or U.S. site)

† http://prsinfo.clinicaltrials.gov/fdaaa.html

Results Reporting Policies—FDAAA

- Which trials?
  - Interventional trials
    - Drugs, biologics, devices
    - Once approved by FDA
  - Not phase 1 drug or not small feasibility device
  - U.S. FDA jurisdiction (e.g., IND/IDE or U.S. site)
- When?
  - Generally within 12 months of (primary) completion date
  - Delays possible

http://prsinfo.clinicaltrials.gov/fdaaa.html
**FDAAA Key Terms**

- Applicable Clinical Trials (ACTs)
  - Interventional trials (with 1 or more arms)
  - Not phase 1; includes drug, biologic, or device
  - At least one site in U.S. (or IND/IDE)
- ACTs initiated on or after 9/27/07 or ongoing as of 12/26/07
- Responsible Party
  - Sponsor, grantee OR
  - Principal Investigator (PI), if designated
- (Primary) Completion Date

http://prsinfo.clinicaltrials.gov/fdaaa.html

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**Results Reporting and Trial Publication**

- Deadlines for reporting to ClinicalTrials.gov are independent of publication status
- Reporting to ClinicalTrials.gov will not interfere with publication*
- ClinicalTrials.gov records are linked, via NCT number, to publications

Overview of ClinicalTrials.gov
Overview of ClinicalTrials.gov

Sample Posted Record*

*Adapted from NCT00312208
### Overview of ClinicalTrials.gov

#### Study 1 of 1 for search of: NCT00312208

**Docetaxel in Breast Cancer**

This study is ongoing, but not recruiting participants.

First Received: April 5, 2006  Last Updated: February 15, 2010  [History of Changes](#)

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Sanofi-Aventis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborator</td>
<td>Cancer International Research Group</td>
</tr>
<tr>
<td>Information provided by</td>
<td>Sanofi-Aventis</td>
</tr>
<tr>
<td>ClinicalTrials.gov Identifier</td>
<td>NCT00312208</td>
</tr>
</tbody>
</table>

**Purpose**

- **Primary objective:**
  - To compare disease-free survival after treatment with docetaxel in combination with doxorubicin and cyclophosphamide to doxorubicin and cyclophosphamide followed by docetaxel in operable adjacent breast cancer HER2negative negative patients with positive axillary lymph nodes.

- **Secondary objectives:**
  - To compare toxicity and quality of life between the 2 above-mentioned arms.
  - To evaluate pathologic and molecular markers for predicting efficacy.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Intervention</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Cancer</td>
<td>Drug: docetaxel, doxorubicin, cyclophosphamide</td>
<td>Phase III</td>
</tr>
<tr>
<td></td>
<td>Drug: Docetaxel, doxorubicin, cyclophosphamide</td>
<td></td>
</tr>
</tbody>
</table>

Study Type: Intervention
Study Design: Allocation: Randomized
Control: Active Control
Overview of ClinicalTrials.gov

Docetaxel in Breast Cancer

This study is ongoing, but not recruiting participants.

First Received: April 5, 2006  Last Updated: February 15, 2010  History of Changes

Tracking Information

First Received Date  April 5, 2006
Last Updated Date  February 15, 2010
Start Date  August 2000
Primary Completion Date  October 2008

Current Primary Outcome Measures

Local, Regional or Metastatic Relapse, or Second Primary Cancer, or Death From Any Cause [Time Frame: Median follow up 66 months]
[Designated as safety issue: No]

Original Primary Outcome Measures

Disease-Free Survival (DFS) [ Time Frame: Interval from the date of randomization to the date of local, regional or metastatic relapse or the date of secondary primary cancer (or death from any cause whichever occurs first)

Change History  Complete list of historical versions of study NCT00312208 on ClinicalTrials.gov Archive Site
Participant Flow

“A table..., including the number of patients who dropped out of the clinical trial and the number of patients excluded from the analysis, if any.”

[Sec. 282(j)(3)(C)(i)]
### Overview of ClinicalTrials.gov

#### Reasons Not Completed

<table>
<thead>
<tr>
<th></th>
<th>Doxorubicin + Cyclophosphamide Followed by Docetaxel (AC → T)</th>
<th>Docetaxel + Doxorubicin and Cyclophosphamide (TAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPLETED</strong></td>
<td>1477</td>
<td>1526</td>
</tr>
<tr>
<td><strong>NOT COMPLETED</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adverse Event</td>
<td>97</td>
<td>61</td>
</tr>
<tr>
<td>Protocol Violation</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Death</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Lack of Efficacy</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Lost to Follow-up</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Withdrawal by Subject</td>
<td>53</td>
<td>42</td>
</tr>
<tr>
<td>Not specified</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

[1] 1649 patients randomized, 1634 patients treated
[2] 1649 patients randomized, 1635 patients treated

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### Baseline Measures

“A table of the demographic and baseline data collected overall and for each arm of the clinical trial…”

[Sec. 282(j)(3)(C)(i)]

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[32]
## Overview of ClinicalTrials.gov

### Baseline Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Doxorubicin + Cyclophosphamide Followed by Docetaxel (AC -&gt; T)</th>
<th>Docetaxel + Doxorubicin and Cyclophosphamide (TAC)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Participants [units: participants]</td>
<td>1640</td>
<td>1640</td>
<td>3298</td>
</tr>
<tr>
<td>Age, Customized [units: Participants]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;=65 years</td>
<td>85</td>
<td>83</td>
<td>168</td>
</tr>
<tr>
<td>Between 65 and 50 years</td>
<td>784</td>
<td>783</td>
<td>1567</td>
</tr>
<tr>
<td>Between 49 and 35 years</td>
<td>689</td>
<td>710</td>
<td>1399</td>
</tr>
<tr>
<td>&lt;=35 years</td>
<td>91</td>
<td>73</td>
<td>164</td>
</tr>
<tr>
<td>Age [units: years] Median (Full Range)</td>
<td>50 (22 to 74)</td>
<td>50 (24 to 74)</td>
<td>50</td>
</tr>
<tr>
<td>Gender [units: participants]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1649</td>
<td>1649</td>
<td>3298</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Region of Enrollment [units: participants]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Hormonal Receptor Status [units: Participants]

<table>
<thead>
<tr>
<th>Status</th>
<th>Pos/atives</th>
<th>Neg/atives</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>1340</td>
<td>1346</td>
<td>2684</td>
</tr>
<tr>
<td>Negative</td>
<td>301</td>
<td>203</td>
<td>694</td>
</tr>
</tbody>
</table>

### Karnofsky Performance Status at Baseline [units: Participants]

<table>
<thead>
<tr>
<th>Status</th>
<th>Score</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 - Activity with effort; some signs of disease</td>
<td>36</td>
<td>69</td>
</tr>
<tr>
<td>90 - Normal activity; minor signs of disease</td>
<td>316</td>
<td>638</td>
</tr>
<tr>
<td>95 - Normal no complaints; no evidence of disease</td>
<td>1296</td>
<td>2591</td>
</tr>
</tbody>
</table>

### Menopausal status [units: Participants]

<table>
<thead>
<tr>
<th>Status</th>
<th>Pre-Menopausal or Other age &lt; 63 Years</th>
<th>Post-Menopausal or Other age &gt; 50 Years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>866</td>
<td>863</td>
<td>1729</td>
</tr>
<tr>
<td>Female</td>
<td>783</td>
<td>796</td>
<td>1589</td>
</tr>
</tbody>
</table>

### Number of Positive Lymph Nodes [units: Participants]

<table>
<thead>
<tr>
<th>Number</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>301</td>
<td>1910</td>
<td>1508</td>
</tr>
<tr>
<td>0 to 10</td>
<td>465</td>
<td>456</td>
<td>911</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>177</td>
<td>187</td>
<td>364</td>
</tr>
</tbody>
</table>

### Patients with at least one surgery [units: Participants]

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastectomy</td>
<td>355</td>
</tr>
<tr>
<td>Lymphadenectomy</td>
<td>283</td>
</tr>
<tr>
<td>Quadrantectomy/Segmental</td>
<td>411</td>
</tr>
</tbody>
</table>

### Primary Tumor [units: Participants]

<table>
<thead>
<tr>
<th>Tumor Size</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>pT1: Tumor &lt;= 2cm</td>
<td>852</td>
</tr>
<tr>
<td>pT2: Tumor in [2 - 5]</td>
<td>824</td>
</tr>
<tr>
<td>pT3: Tumor &gt; 5cm</td>
<td>121</td>
</tr>
<tr>
<td>pT4: Tumor with extension to chest</td>
<td>-</td>
</tr>
</tbody>
</table>

**Default** Required Measures

**User-Specified Baseline Measures**
**Outcome Measure**

“…a table of values for each of the primary and secondary outcome measures for each arm of the clinical trial…”

[Sec. 282(j)(3)(C)(ii)]

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**Statistical Analysis**

“…a table of values for each of the primary and secondary outcome measures…, including the results of scientifically appropriate tests of the statistical significance of such outcome measures.”

[Sec. 282(j)(3)(C)(ii)]
Primary Outcome Measure

Local, Regional or Metastatic Relapse, or Second Primary Cancer, or Death From Any Cause
[ Time Frame: Median follow-up 65 months ]

Measured Values

<table>
<thead>
<tr>
<th></th>
<th>Doxorubicin + Cyclophosphamide Followed by Docetaxel (AC → T)</th>
<th>Docetaxel + Doxorubicin and Cyclophosphamide (TAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Participants Analyzed [units: participants]</td>
<td>1649</td>
<td>1649</td>
</tr>
<tr>
<td>Local, Regional or Metastatic Relapse, or Second Primary Cancer, or Death From Any Cause  [units: Participants]</td>
<td>356</td>
<td>362</td>
</tr>
</tbody>
</table>

Statistical Analysis 1 for Local, Regional or Metastatic Relapse, or Second Primary Cancer, or Death From Any Cause

- Groups [1]: All groups
- Method [2]: Log Rank
- P Value [2]: 0.978
- Hazard Ratio (HR) [3]: 1.00
- 95% Confidence Interval [4]: (0.86 to 1.16)

Secondary Outcome Measure

Death From Any Cause
[ Time Frame: Median follow-up of 65 months ]

Measured Values

<table>
<thead>
<tr>
<th></th>
<th>Doxorubicin + Cyclophosphamide Followed by Docetaxel (AC → T)</th>
<th>Docetaxel + Doxorubicin and Cyclophosphamide (TAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Participants Analyzed [units: participants]</td>
<td>1649</td>
<td>1649</td>
</tr>
<tr>
<td>Death From Any Cause  [units: Participants]</td>
<td>167</td>
<td>262</td>
</tr>
</tbody>
</table>

Statistical Analysis 1 for Death From Any Cause

- Groups [1]: All groups
- Method [2]: Log Rank
- P Value [2]: 0.371
- Hazard Ratio (HR) [3]: 0.91
- 95% Confidence Interval [4]: (0.75 to 1.11)
## Serious Adverse Events

“A table of anticipated and unanticipated serious adverse events grouped by organ system, with number and frequency of such event in each arm of the clinical trial.”

[Sec. 282(j)(3)(I)(iii)(I)]

<table>
<thead>
<tr>
<th>Serious Adverse Events</th>
<th>Docetaxel + Cyclophosphamide Followed by Docetaxel (AC -&gt; T)</th>
<th>Docetaxel + Docetaxel and Cyclophosphamide (TAG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total, serious adverse events</td>
<td>3,311/1,634 (20.20%)</td>
<td>8,203/1,635 (31.80%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood and lymphatic system disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anemia</td>
<td>3/1,634 (0.18%)</td>
<td>8/1,635 (0.05%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coagulation disorders</td>
<td>5/1,634 (0.00%)</td>
<td>1/1,635 (0.00%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemorrhage Vaginal</td>
<td>1/1,634 (0.00%)</td>
<td>1/1,635 (0.00%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leukopenia</td>
<td>18/1,634 (1.19%)</td>
<td>16/1,635 (2.43%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lymphadenopathy</td>
<td>7/1,634 (0.00%)</td>
<td>1/1,635 (0.00%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lymphedema</td>
<td>1/1,634 (0.00%)</td>
<td>2/1,635 (0.12%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>1/1,634 (0.00%)</td>
<td>1/1,635 (0.00%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>1/1,634 (0.00%)</td>
<td>1/1,635 (0.00%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardio disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>3/1,634 (0.18%)</td>
<td>3/1,635 (0.18%)</td>
</tr>
<tr>
<td># participants affected / at risk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† Events were collected by systematic assessment
1 Term from vocabulary, COSTART
Overview of ClinicalTrials.gov

Frequent Adverse Events

“A table of anticipated and unanticipated adverse events that are not included in the [Serious Adverse Events] table…that exceed a frequency of 5 percent within any arm of the clinical trial, grouped by organ system, with number and frequency of such event in each arm of the clinical trial.”

[Sec. 282(j)(3)(I)(iii)(II)]

Other Adverse Events

<table>
<thead>
<tr>
<th></th>
<th>Doxorubicin + Cyclophosphamide Followed by Docetaxel (AC -&gt; T)</th>
<th>Docetaxel + Doxorubicin and Cyclophosphamide (TAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total, other (not including serious) adverse events # participants affected / at risk</td>
<td>1634/1634</td>
<td>1629/1635</td>
</tr>
<tr>
<td>Blood and lymphatic system disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anemia [^1]^[^2] # participants affected / at risk</td>
<td>461/1634 (28.21%)</td>
<td>658/1635 (40.24%)</td>
</tr>
<tr>
<td>Epistaxis [^1] [^1] # participants affected / at risk</td>
<td>123/1634 (7.53%)</td>
<td>72/1635 (4.40%)</td>
</tr>
<tr>
<td>Leucopenia [^1]^[^1] # participants affected / at risk</td>
<td>59/1634 (3.61%)</td>
<td>88/1635 (5.38%)</td>
</tr>
<tr>
<td>Lymphedema [^1] [^1] # participants affected / at risk</td>
<td>101/1634 (6.18%)</td>
<td>109/1635 (6.67%)</td>
</tr>
<tr>
<td>Neutropenia [^1]^[^2] # participants affected / at risk</td>
<td>1133/1634 (69.34%)</td>
<td>1049/1635 (64.16%)</td>
</tr>
</tbody>
</table>

\[^1\] Events were collected by systematic assessment
\[^2\] Term from vocabulary, COSTART
\[^1\] Term from vocabulary, NCI-CTCAE
Certain Agreements

“Whether there exists an agreement (other than an agreement solely to comply with applicable provisions of law protecting the privacy of participants) between the sponsor or its agent and the principal investigator (unless the sponsor is an employer of the principal investigator) that restricts in any manner the ability of the principal investigator, after the completion date of the trial, to discuss the results of the trial at a scientific meeting or any other public or private forum, or to publish in a scientific or academic journal information concerning the results of the trial.”

[Sec. 282(j)(3)(C)(iv)]

Certain Agreements:

Principal Investigators are NOT employed by the organization sponsoring the study.

There IS an agreement between Principal Investigators and the Sponsor (or its agents) that restricts the PI’s rights to discuss or publish trial results after the trial is completed.

The agreement:

☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is less than or equal to 60 days. The sponsor cannot require changes to the communication and cannot extend the embargo.

☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is more than 60 days but less than or equal to 180 days. The sponsor cannot require changes to the communication and cannot extend the embargo.

☐ Other disclosure agreement that restricts the right of the PI to discuss or publish trial results after the trial is completed.

Restriction Description: If no publication has occurred within 12 months of the completion of the study, the investigator shall have the right to publish/present independently the results of the study. The investigator shall provide the Sponsor with a copy of any such presentation/publication for comment at least 30 days before any presentation/submission for publication. If requested by the Sponsor, any presentation/submission shall be delayed up to 90 days, to allow the Sponsor to preserve its proprietary rights.
Protocol/Results Review Criteria

- Protocol and results must be clear and informative
- Review focuses on:
  - Logic and internal consistency
  - Apparent validity
  - Meaningful entries
  - Formatting
PRS Information Resources

- Protocol Registration
  - Data Elements
  - Detailed Review Items
- Results
  - Data Elements
  - Detailed Review Items
  - Pre-submission Checklist
  - Helpful Hints and Common Errors
- User’s Guide [PRS Main Menu]

http://prsinfo.clinicaltrials.gov/fdaaa.html

Problems Detected in Results Records
Overview of ClinicalTrials.gov

Need for Rigor and Precision

http://xkcd.com/552/

Invalid Entry

<table>
<thead>
<tr>
<th></th>
<th>Intervention X</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Participants Analyzed [units: Participants]</td>
<td>28</td>
<td>27</td>
</tr>
<tr>
<td>Hours Per Day of Sleep [units: Average Hours per Day]</td>
<td>823 ± 92</td>
<td>864 ± 106</td>
</tr>
<tr>
<td>Mean ± Standard Deviation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Internal Inconsistency

#### Double Blind Treatment

<table>
<thead>
<tr>
<th></th>
<th>Drug</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STARTED</strong></td>
<td>299</td>
<td>303</td>
</tr>
<tr>
<td>Received</td>
<td>297</td>
<td>302</td>
</tr>
<tr>
<td><strong>COMPLETED</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not Completed</td>
<td>299</td>
<td>303</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Drug</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STARTED</strong></td>
<td>151</td>
<td>140</td>
</tr>
<tr>
<td><strong>COMPLETED</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not Completed</td>
<td>151</td>
<td>140</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Drug</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STARTED</strong></td>
<td>57</td>
<td>47</td>
</tr>
<tr>
<td><strong>COMPLETED</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not Completed</td>
<td>57</td>
<td>47</td>
</tr>
</tbody>
</table>

### “This isn't right. This isn't even wrong.”

Wolfgang Pauli, on a paper submitted by a physicist colleague; Swiss (Austrian-born) physicist (1900–1958)
### Informative Entry

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Pregnancy Rate (Pearl Index)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure Description</td>
<td>Pearl Index = (100)<em>(number of pregnancies)</em>(4 cycles/year)/number of 91-day cycles completed.</td>
</tr>
<tr>
<td>Time Frame</td>
<td>After the onset of treatment and within 14 days after the last combination pill (approx. 1 year of treatment)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DR-1011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Participants Analyzed</td>
</tr>
<tr>
<td>Pregnancy Rate (Pearl Index) [units: Pregnancies per 100 Women Years Exposure]</td>
</tr>
</tbody>
</table>

### Issues in Reporting Results
Experience With Results Database

• Entering results is similar to writing a journal article
• Data provider must be able to understand the study design and data analysis
  – Typically, the investigator and/or a statistician will need to be involved

Who Is the Audience?

PI and clinical research team
Other medical researchers in same field
Other medical researchers in other fields
Other readers of the medical literature
Science writers
Lay public (readers of consumer health literature)
Clarifications About Results Reporting Requirements

- Intended audience vs. intended beneficiaries
- FDAAA mandates pertain to reporting, not to conduct of clinical trials
- Results reporting to ClinicalTrials.gov complements journal publication

ICMJE Policy

“…will not consider results posted in the same primary clinical trials register in which the initial registration resides as previous publication if the results are presented in the form of a brief, structured (<500 words) abstract or table.”

[NOTE: Only about 53 percent of posted results records have associated publications]
Sample Uses of ClinicalTrials.gov

- Access information about specific trial
  - Track progress and protocol changes
  - See results
- Assess available evidence relevant to a specific clinical topic
- Assess nature of current and past research in a given area
- Review methodologies used in clinical trials

Select Publications


Additional Information

General ClinicalTrials.gov information:
http://prsinfo.clinicaltrials.gov

FDAAA-related information:
http://prsinfo.clinicaltrials.gov/fdaaa.html

Office of Extramural Research:
http://grants.nih.gov/Clinicaltrials_fdaaa/

Questions?
register@clinicaltrials.gov