Practical Implementation of Return of Results to Patients and Other Stakeholders
Barbara E. Bierer, MD, Rebecca Li, Ph.D. Laurie Myers, Deborah Collyar

MRCT Center at Harvard Webinar
February 19, 2015
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The MRCT Center’s Purpose is to improve the design, conduct, and oversight of multi-regional clinical trials, especially trials sited in or involving the developing world; to simplify research through the use of best practices; and to foster respect for research participants, efficacy, safety and fairness in transnational, trans-cultural human subjects research.

Return of general research results is one of many MRCT Center initiatives.
Return of results: Harvard MRCT workgroup

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<thead>
<tr>
<th>Name</th>
<th>Organization/Role</th>
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<tr>
<td>Salvatore Alesci</td>
<td>PhRMA</td>
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<tr>
<td>Mark Barnes</td>
<td>Ropes &amp; Gray, LLP</td>
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<tr>
<td>Richard Bergstrom</td>
<td>EFPIA</td>
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<tr>
<td>Deborah Collyar</td>
<td>PAIR (Co-Chair)</td>
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<tr>
<td>Alla Digilova</td>
<td>MRCT</td>
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<td>Elizabeth Frank-Dana-Farber</td>
<td>Cancer Institute (patient advocate)</td>
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<td>David Forster</td>
<td>WIRB Copernicus Group</td>
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<td>Elizabeth Garofalo</td>
<td>Novartis Pharma AG</td>
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<td>Barbara Godlew</td>
<td>The FAIRE Company, LLC</td>
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<td>Laura Hagan</td>
<td>Merck Serano</td>
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<td>Sandra Hayes-Licitra</td>
<td>Johnson &amp; Johnson</td>
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<td>Angelika Joos</td>
<td>Merck Sharp &amp; Dohme</td>
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<td>Paulo Lacativa</td>
<td>CCBR Clinical Research</td>
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<td>Yann LeCam</td>
<td>EURODIS</td>
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<td>Rebecca H Li</td>
<td>MRCT</td>
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<td>Marcello Losso</td>
<td>HIV RAMOS</td>
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<td>Laurie Myers</td>
<td>Merck (Co-Chair)</td>
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<td>Pearl O'Rourke</td>
<td>Partners HealthCare</td>
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<tr>
<td>Nesri Padayatchi</td>
<td>Univ. of KwaZulu-Natal</td>
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<tr>
<td>Mary Ann Plummer</td>
<td>(prior Co-Chair)</td>
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<td>Ben Rotz</td>
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<td>Jim Saunders</td>
<td>NE IRB</td>
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<td>Amish Shah</td>
<td>MRCT / HLS</td>
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<td>Patrick Taylor</td>
<td>Children's Hospital, Boston</td>
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<td>Sarah White</td>
<td>Partners HealthCare</td>
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<td>Sabune Winkler</td>
<td>HMS</td>
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<td>Behtash Bahador</td>
<td>CISCRP</td>
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<td>Nicola Bedlington</td>
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<tr>
<td>Barbara Bierer</td>
<td>Brigham &amp; Women's Hospital/MRCT</td>
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<td>Assunta De Rienzo</td>
<td>Brigham and Women's Hospital</td>
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<td>Dimitrios Dogas</td>
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<td>Phyllis Frost</td>
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<td>Pierre Gervais</td>
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<td>David Haerry</td>
<td>European AIDS Treatment Group</td>
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<td>Zach Hallinan</td>
<td>CISCRP</td>
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<td>Cheryl Jernigan</td>
<td>Susan G. Komen</td>
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<td>Barbara Kress</td>
<td>Merck</td>
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<td>Sarah Larson</td>
<td>Biogen Idec</td>
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<td>David Leventhal</td>
<td>Pfizer</td>
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<td>Craig Lipset</td>
<td>Pfizer</td>
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<tr>
<td>Holly Fernandez Lynch</td>
<td>Harvard Law School</td>
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<td>Alex Nasr</td>
<td>AbbVie</td>
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<td>Mary Oster</td>
<td>NEIRB</td>
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<td>Jane Perlmutter</td>
<td>Gemini Group</td>
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<td>Sandy Prucka</td>
<td>Lilly</td>
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<td>Beth Roxland</td>
<td>Johnson &amp; Johnson</td>
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<td>Jessica Scott</td>
<td>GSK</td>
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<td>Zachary Shapiro</td>
<td>MRCT / HLS</td>
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<tr>
<td>David Walling</td>
<td>Collaborative NeuroScience</td>
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<td>Marc Wilenzick</td>
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<td>Elizabeth Witte</td>
<td>HMS</td>
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Returning Results and the MRCT Mission

Goals: Returning Clinical Trial Results to study participants

• Develop standards and best practices.
• Create a guidance document, including templates.
• Address perceived barriers to widespread implementation.

Returning results allows sponsors and investigators to recognize and honor the essential contributions and volunteerism of clinical trial participants.

Expectations of academic, industry, not-for-profit sponsors similar

Returning results is a key aspect of Improving Transparency of clinical trials and Increasing Public Trust.

Scope:
Communication and dissemination of summary research results to individual participants
Why now?

Declaration of Helsinki

Paragraph 26:

All medical research subjects should be given the option of being informed about the general outcome and results of the study.

http://www.wma.net/en/30publications/10policies/b3/

Sponsor of a clinical trial must submit “a summary of the results of the clinical trial together with a summary that is understandable to a layperson, and the clinical study report, where applicable, within the defined timelines.”

“Timelines” are defined as “12 months after the study ends unless delay is scientifically justified in the protocol”

Article 37:

4. Irrespective of the outcome of a clinical trial, within one year from the end of a clinical trial in all Member States concerned, the sponsor shall submit to the EU database a summary of the results of the clinical trial.
3. Sharing Results with Patients Who Participate in Clinical Trials

In order to help inform and educate patients about the clinical trials in which they participate, biopharmaceutical companies will work with regulators to adopt mechanisms for providing a factual summary of clinical trial results and make the summaries available to research participants.

http://www.phrma.org/sites/default/files/pdf/PhRMAPrinciplesForResponsibleClinicalTrialDataSharing.pdf
Factors important when considering research

- Opportunity to improve own health: 84%
- Medical bills covered if injured: 84%
- Reputation of researchers: 76%
- Improve health of others: 74%
- Getting results after trial ended: 73%
- Potential negative impact on health: 72%
- Side effects of new treatment: 63%
- Option to stay on treatment after trial: 56%
- Distance travelled to trial visits: 56%
- Keeping my doctor during trial: 52%
- My doctor's recommendation: 50%
- Privacy and confidentiality: 50%
- The friendliness of staff: 47%
- Number of visits and time to participate: 46%
- Possibility of placebo: 37%
- Being paid to participate: 16%

N = 1,621
How Important Were the Following Factors in Your Choosing to Participate in a Clinical Research Study?

<table>
<thead>
<tr>
<th>Percent rating “Somewhat/Very Important”</th>
<th>Overall</th>
<th>Female</th>
<th>Male</th>
<th>NA</th>
<th>SA</th>
<th>EU</th>
<th>Apac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality medical care</td>
<td>85%</td>
<td>90%</td>
<td>79%</td>
<td>90%</td>
<td>55%</td>
<td>61%</td>
<td>58%</td>
</tr>
<tr>
<td>Access to medical professionals</td>
<td>83%</td>
<td>88%</td>
<td>78%</td>
<td>88%</td>
<td>57%</td>
<td>63%</td>
<td>57%</td>
</tr>
<tr>
<td>Learn about my disease</td>
<td>79%</td>
<td>83%</td>
<td>74%</td>
<td>84%</td>
<td>47%</td>
<td>55%</td>
<td>59%</td>
</tr>
<tr>
<td>Receive regular updates about the research while I’m enrolled</td>
<td>68%</td>
<td>70%</td>
<td>66%</td>
<td>71%</td>
<td>59%</td>
<td>52%</td>
<td>57%</td>
</tr>
<tr>
<td>Receive information about the results after the study has ended</td>
<td>71%</td>
<td>73%</td>
<td>69%</td>
<td>73%</td>
<td>68%</td>
<td>55%</td>
<td>59%</td>
</tr>
<tr>
<td>Feel part of a community</td>
<td>61%</td>
<td>65%</td>
<td>57%</td>
<td>62%</td>
<td>63%</td>
<td>57%</td>
<td>53%</td>
</tr>
</tbody>
</table>

Base: Have Participated

www.ciscrp.org
Participants prefer frequent updates

“How often would you like to receive an update on the status of your clinical trial results?”

- As often as possible: 3%
- Every 3 months: 28%
- Every 6 months: 31%
- Every year: 28%
- Once at the end of the study: 3%
- Never: 7%

Return of results should become the expectation and practice in clinical research. The practice demonstrates:

- Appreciation of the contributions and volunteerism of the individual participant and stewardship of the general public.

- The core principle that each participant has a right to know the outcome of his or her participation (and his or her own information) and understand the results.

- Participant has a right to choose whether to (and who can) have that information.

Standard methodologies and approaches should be developed so that roles and responsibilities are clear, expectations are set and met, and multinational requirements appreciated from the outset.

Funding for return of results should be provided as an anticipated component of human subjects research.
A Novel Approach to Returning Results

• We have partnered with other working groups addressing returning results, including:
  • Alliance for Clinical Trials in Oncology (Alliance)
  • CISCRP Group
  • DIA Lay Summary Working Group
  • EFPIA
  • Pfizer Blue Button Project
  • NIH Alliance Working Group
  • Dana Farber Cancer Institute

• Includes input from multiple stakeholder groups:
  o Academics
  o Industry
  o Regulators
  o Patient-Advocates and patients
  o CROs
  o IRBs/ECs
The Harvard MRCT Deliverables

**MRCT Center Return of Results Guidance** for groups wishing to return results including:

- Content (essential components, source documentation, cultural and health literacy considerations)
- Logistics and detailed processes for results sharing
- Timing
- Special considerations

**MRCT Center Return of Results Toolkit** including:

- Templates for Phase1, Phase II/III, studies ending early
- Neutral language guide
- Endpoints language guide
- Useful Checklists
Returning Results: Perceived Barriers

- Practical Considerations and Issues, including:
  - Who, What, Where, When, and How

- Logistics
  - Costs
  - Methods

- Content and Comprehension
  - Content consistent with EMA
  - What do patients/participants want to know? And do they understand implications?
  - Understandable

- Misinterpreting intent
  - FDA and other regulators might view returning results as a promotional activity
Process Flow for Returning Results

Pre-Study preparation

• Organizational preparation, policies, processes
• Establish level/timing/delivery
• Resource planning

Protocol Development

• Describes ROR as voluntary process, including who what where when how
• Include ICF section description

During study conduct

• Letter of appreciation
• Last study visit of participant content
• Intermittent engagement with participant thereafter

When study ends

• Content of summary document (and health literacy principles)
• Adherence to global regulatory framework
Last study visit of participant

• What to anticipate after last study visit
• Advice regarding monitoring for adverse events, both rare and common, severe and serious, if appropriate
• If questions, or adverse events, whom to contact (and contact information)
• A reminder, if appropriate, that they may be contacted in the future if any adverse events are uncovered that might impact their health.
• Access to any benefits or care as a consequence of participation, if any
• Advice as to where to obtain further treatment and/or clinical care
• Information regarding personal data developed during the study, if appropriate
• Whether they would or would not like to receive summary study results at end of study.
• If opt in to receive RSS, how to access the information and when to anticipate the information. Ensure the format for the data will be accessible
• Contact information for the participant, if appropriate.
• Designation a third party to receive results, if desired
Aggregate Study Results: Suggestions

To Whom:

All participants who have been enrolled and, if appropriate, randomized

Method of Return:

- Interactive methods (e.g., face-to-face meeting(s), telephone call(s), two-way online meeting(s), dynamic email exchange, etc.)
- One-way communications (e.g. video summary, automated phone message, printed materials)
- Internet based methods (flexible, cost-effective, current, security may be important)
  - Open models
  - Password protected or other

Timing
# Timing of Return of Results: Suggestions

<table>
<thead>
<tr>
<th>Trial Type</th>
<th>Timing</th>
<th>Source Document</th>
<th>Action</th>
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</table>
| **Regulated trials** (typically industry sponsored interventional studies) | Within 1 year of completion or ‘end of study’ defined as 1 year after LSLV | Clinical study report (CSR) or ICHE3 synopsis (CSR synopsis) | • Return RRS to trial participants  
• Post non-technical summary on CT.gov, EudraCT (not required or supported to-date)  
• Harmonization across sites |
| Consistent with EMA regulation                  |                                                                        |                                                       |                                                                      |
| **Academic / non-regulated trials**             | Within 1 year of the study close by the IRB or final data analysis or concurrent with the release of the first study publication | Manuscript or Publication                              | • Return RRS to trial participants including unpublished trials |
| **Longitudinal / observational studies**        | Concurrent with the release of each major study publication             | Manuscript or Publication                              | • Return RRS to trial participants and after each update |
Creation of Summary

- Summary must be unbiased and not promotional
- Summary to be reviewed by independent and objective editor(s) and patient representative(s)
- Plain language (sixth-eight grade reading level) and apply health literacy principles.
- Translation into additional languages consistent with translations of informed consent
- An individual from the study site or neutral informed third party should be available to answer questions for participants
- Provisions should be made for vulnerable populations and other instances
- Consideration as to whether to, and whom to, inform in the event of a participant’s death
1. Clinical trial identification
2. Name and contact details of the sponsor;
3. Main objectives
4. Population of subjects (include eligibility criteria);
5. Investigational medicinal products used;
6. Description of adverse reactions and frequency;
7. Overall results of the clinical trial;
8. Comments on the outcome of the clinical trial;
9. Whether follow up clinical trials are foreseen;
10. Where additional information could be found.
Health Literacy

Emphasis on health literacy

- Health Literacy is not the same as literacy level or ability to read.
  - Health Literacy: “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.”

- Even those with adequate health literacy can struggle at times to understand health information, and appreciate clear communication. The complexity of the healthcare system can challenge everyone!

- Application of “universal precautions” facilitates understanding.

- Input of participants into the development of the content, and testing of the summary to confirm comprehension, are both critical.

Application of Health Literacy Principles

- Plain language; 6th grade reading level or lower
- Use active voice and short sentences
- Formatting to aid comprehension:
  - Headlines to organize information
  - Presentation of the “big picture” before the details (inverted pyramid writing style)
  - Descriptive headers and subheadings
  - Limited use of tables and charts
  - Adequate “white space” (e.g. separate paragraphs and topics by one or two lines, a minimum of 12-point font)
  - Sufficient contrast between font and background color
  - Avoidance of text in “all caps”

- Tools such as CDC Clear Communication Index may be used to measure successful application of health literacy principles
  
  http://www.cdc.gov/healthcommunication/ClearCommunicationIndex/
Numeracy

- The ability to use basic probability and mathematical concepts to explain mathematical and statistical terms.

- Numeracy principles in health literacy focus on simple explanations, instead of using complex fractions, percentages or statistical terms.

- Consider when to include numbers—don’t ignore them!
  - Give people the information they need to make their own choices.
  - Providing necessary numbers can increase comprehension.

- Less is more – how critical are the numbers?
  - Omitting unrelated numbers can lead to improved comprehension and higher quality choices.
  - The depth of necessary data will differ according to the issue at hand. For example, a cancer patient choosing a treatment type will need data regarding effectiveness and survival rates, where a patient wanting to learn how to use an inhaler does not need data on asthma prevalence.

- In other words, “give the right tool at the right time”.
Cultural Literacy

- Numerous studies have highlighted the under-representation of racial and ethnic minorities in clinical trials.

- Translate documents into languages used by all trial locations, and if trial participants exceed a certain percentage (i.e. 10%) at a specific trial location. A native speaker should review.

- Certain anatomical and medical terms that are adequately defined in English may need further definition in another language. In Spanish, the term *cancer del utero* is used to encompass both cervical cancer and uterine cancer.

- Consider training investigators in cultural sensitivity.

  - Sensitize investigators that culture may have an impact on how participants choose to receive summaries – for instance, they may prefer to have family members present.
MRCT Center Templates

• Located in ROR Toolkit
• Includes EMA required elements
• Examples
• Incorporates principles of Health Literacy and Numeracy
• Templates created for Phase I, Phase II/III, Trials ending early
<table>
<thead>
<tr>
<th>Language to avoid</th>
<th>Language to consider</th>
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<tbody>
<tr>
<td>This study proved...</td>
<td>This study found that... This does not mean everyone in that group had these results.</td>
</tr>
<tr>
<td>This study proved that using &lt;Drug A&gt; to prevent &lt;disease&gt; is effective.</td>
<td>This study found that people with &lt;disease&gt; who got &lt;Drug A&gt; had &lt;primary endpoint&gt;.</td>
</tr>
<tr>
<td>The combination treatment of &lt;Drug A and B&gt; may also help alleviate &lt;a different disease/condition than what was studied&gt;</td>
<td>When &lt;Drug A and B&gt; are used together, people in this study had &lt;study endpoint&gt;.</td>
</tr>
<tr>
<td>This means that &lt;Drug A&gt; is better than &lt;Drug B&gt;.</td>
<td>In this study, people who got &lt;Drug A&gt; had more &lt;study endpoint&gt; than some people who got &lt;Drug B&gt; if they had the same health conditions.</td>
</tr>
<tr>
<td>&lt;Drug A&gt; works better than &lt;Drug B&gt;, but some people didn’t tolerate it as well.</td>
<td>In this study, more people got &lt;study endpoint&gt; with &lt;Drug A&gt;. They also had more adverse events that interfered with their daily lives, like &lt;specific adverse events&gt;.</td>
</tr>
<tr>
<td>&lt;Drug A&gt; is better tolerated than Drug B.</td>
<td>In this study, fewer patients who took &lt;Drug A&gt; had &lt;list adverse events&gt;, than patients who took</td>
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## Endpoint Descriptions and Examples

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<tr>
<td>Composite</td>
</tr>
<tr>
<td>Surrogate</td>
</tr>
<tr>
<td>Mortality</td>
</tr>
<tr>
<td>Morbidity</td>
</tr>
<tr>
<td>Progression-free survival (or disease-free survival)</td>
</tr>
<tr>
<td>Patient-Reported Outcome on symptoms or functions (e.g., pain)</td>
</tr>
<tr>
<td>Exploratory Biomarker / Pharmacogenomics</td>
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<tr>
<td>Prevention or incidence endpoint</td>
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<tr>
<td>Non-inferiority endpoints</td>
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### Endpoint Descriptions and Examples

#### Mortality Endpoint Description and Example

<table>
<thead>
<tr>
<th>Endpoint Description</th>
<th>Example in plain language</th>
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</thead>
<tbody>
<tr>
<td>The goal of this trial is to see if giving drug X (or treatment ABC) or Y (or treatment XYZ) will help patients with a particular disease live longer.</td>
<td>NO EFFECT - Patients in both groups lived about the same amount of time, whether they got drug X or Y (or treatments ABC or XYZ). EFFECT – People in Group A (ABC treatment) lived about 15 months. (some people lived less than 15 months and some lived longer than 15 months.) People in Group B (XYZ treatment) (that included a sugar substitute instead of the active drug) lived about 12 months (some people lived less than 12 months and some lived longer than 12 months. This means that people in Group A (ABC treatment) lived about 3 months longer than people in Group B. This result was different enough that it is unlikely to have happened by chance alone.</td>
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FDAs points to consider

- Truthful accurate and non-misleading information about trial results that may benefit participants
- The language should be simple and factual, neutral in its description
- The information should not be selective (e.g. including 2° endpoints that “worked” but deleting others)
- The information cannot make pre-approval claims of safety or effectiveness in a promotional context (company website)

Adapted from R Moscicki, 5 Feb 2015
Special Considerations

- Trials that close early
  - Futility
  - Efficacy
  - Safety
  - Low accrual

- Observational, long-term follow-up, and extension studies

- Notification of results to a 3rd party designated by the participant

- Vulnerable populations

- Legally Authorized Representatives and other designated parties

- Return of Results in the event of participant death

- Assent for Return of Results to Children

- Complexities of the Global Context
Role of the IRB/RECs: Special Considerations

- If return of results is planned, the ICF should include that statement and the plan, and the IRB/REC should review.

- If returning results occurs when the study is still open, the IRB/REC should review the materials (ICH E6).

- When a study is closed, the IRB/REC does not have jurisdiction and will likely not wish to review materials; patients/participants are not considered “human subjects”. Note that definition of “end of study” may vary by sponsor and regulatory authority.

- Many investigators think it would be helpful for the IRB/REC to know plan for communicating the results, and the content of that communication, at the same time the subjects are provided the results but not as a mandatory process. In this situation, the role of the IRB/REC should be decided beforehand.

- IRB/RECs vary significantly. Sponsors and investigators should ask the IRB/REC of record early in the process. Guidance for IRB provided
Studies that *may* not warrant return of results

- Results indeterminate or not powered to deliver “results:”
  - Exploratory tissue and blood studies
  - Pilot proof of concept studies
  - Some minimal risk studies may be of insufficient scientific rigor to justify the return of results, such as research required of students in order to graduate.
- Tissue banking and bio banking activities
- Research conducted under a waiver of consent
- Exempt studies
- Cluster randomized studies
- Pragmatic clinical trials.
- Studies of illegal or socially unacceptable behavior such as illegal drug use or prostitution, where providing results may create the potential for a breach of confidentiality and subsequent harm.
  - Studies with certificates of confidentiality
  - Small studies with limited numbers of subjects may compromise privacy
Promotional activity and Agency concerns

- Regulatory requirements prohibit any type of promotional communication prior to FDA (and other regulatory agencies) marketing approval

- What constitutes “promotional language” in describing results?

- Will the FDA (and other regulatory agencies) provide guidance on what the agency considers “promotional” in a timely fashion?

- If not, does the FDA (and other regulatory agencies) plan to review—or require review of—each participant summary prior to release?
  - Will the review be timely?
  - Will the review differ for different phases of drug development (Phase I vs Phase III, etc)?
Collaboration for Global Adoption

- Return of results should become the expectation and practice in clinical research. It is the right thing to do.

- Our current Guidance and Toolkit are designed for all sponsors (PI-initiated, industry, NIH) to use in all trial types (all phases, FDA- and EMA-regulated, comparative effectiveness, biobanking, etc.). Logistics, content, process and standard methodologies and approaches have been delineated.

- Harmonization and consistency is critically important.

- We have discussed a potential collaboration with TransCelerate, EFPIA and PhRMA to disseminate our work further through their efforts. We have approached NIH to partner in this transparency effort.

- We invite additional collaborators and partners.
Thank you

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