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12 key areas of research:
non-technical summary of 25 studies and presentations

This supplement is a non-technical review of some of the most interesting studies presented at this meeting. Technical reports from the conference are published in HIV Treatment Bulletin, available online and to order in print from the i-Base website (www.i-Base.info).
Hyperlinks in this PDF file link directly to each abstract or session.
All abstracts can be seen online:
http://www.retroconference.org

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Introduction: what is CROI?

CROI stands for Conference on Retroviruses and Opportunistic Infections, which is a bit of a mouthful – CROI is easier and this year was the 15th meeting.

This conference, always held in the US, is probably the most important HIV scientific meeting held each year. Many researchers hold back their studies so they can have a chance to present them at this meeting.

Most of the important lectures and presentations are also available to watch free online. Summaries of all the studies are also online at the conference website: www.retroconference.org

Although some talks are very technical, other give good overviews that are easier to understand. It is a good way to learn.

1. Benefits of continuous treatment and earlier treatment

Generally, many studies are showing an overall benefit of treatment, especially once viral load is undetectable (less than 50 copies/ml). These study results are behind recent guidelines recommending starting treatment a bit earlier.

Results from the SMART treatment interruption study showed that people had fewer serious illnesses when on treatment with an undetectable viral load, compared to not being on treatment. Importantly, this was even at high CD4 counts ie - above 350 cells/mm3. [1, 2, 3]

One presentation from SMART showed that people who restarted treatment in this trial closed the gap between the risks of serious infections compared to the lower rate seen in people on continuous treatment. It confirmed that the researchers made the right decision to stop the trial early. [1]

The same presentation also showed that even 18 months after restarting treatment, CD4 counts were still significantly lower than when the trial started – by about 100 cells/mm3. This was also unexpected. Most people assumed that a treatment interruption would not have such a long lasting or significant impact.

Results from the SMART trial, together with the fact that current treatments are generally more tolerable, is one of the reasons that the UK guidelines are likely to change to recommend starting at 350 rather than 200 cells/mm3.

A second presentation from the SMART team showed that being off-treatment, or having detectable viral load on treatment, was linked to increases in some biomarkers (markers in blood tests). People with highest levels of the markers D-dimer and IL-6 were found to be at significantly higher risk for major events (26-times the risk compared to people with the lowest levels).

This suggests perhaps using this simple blood test to identify people at highest or lowest risks. [4]

References:

1. El-Sadr W et al. Abstract 36.
http://www.Retroconference.org:8888/2008/Abstracts/32784.htm

2. Bruyand M et al. Abstract 15.
http://www.Retroconference.org:8888/2008/Abstracts/31415.htm

3. Zoufaly A et al. Abstract 16.
http://www.Retroconference.org:8888/2008/Abstracts/31284.htm

4. Ref: Kuller L et al. Oral abstract 139.
http://www.retroconference.org/2008/Abstracts/32757.htm

These oral presentations are available to view online from the conference website (Monday 4 February).

2. Atazanavir/r vs lopinavir/r (Kaletra) as first treatment

A large (almost 900 patients), randomised, international study (CASTLE) compared atazanavir/r to Kaletra (lopinavir/r) and found both drugs had similar results in people using treatment for the first time. Atazanavir had less impact on cholesterol. Tenofovir + FTC were the background nukes.

Until now, atazanavir/r has not been approved in Europe for first-line therapy, even though doctors have sometimes prescribed it. As a once-daily drug, this will be a new important option in treatment guidelines.

Ref: Molina JF et al. Abstract 37.
http://www.retroconference.org/2008/Abstracts/31137.htm

This oral presentation is available to view online from the conference website (Monday 4 February).

3. Side effects: abacavir and risk of heart attack

The large prospective D:A:D cohort study (33,000 patients followed for an average of 7 years) reported current (or recent) use of abacavir was linked with an additional 90% increased risk of cardiovascular disease (heart attack).

The real 'absolute' effect was most significant in people who had the highest underlying risk for heart disease. This finding generated a lot of discussion because this is the first time this has been reported.

Heart disease is complicated because many factors can contribute to the risk of a heart attack. These include things you can change, such as diet, smoking, exercise and lipids (cholesterol levels). Being a current smoker increases your risk by 200-300% for example.

They also include things that you can't change, such as age (risk increases as you get older), gender (risks are higher in men), family history and personal medical history.

It is easy for you or your doctor to calculate your risk of heart disease using an online Framingham calculator.
http://www.riskscore.org.uk/
Enter information about your age, gender, smoking status, blood pressure and cholesterol online and press a button. It only takes a few minutes and is recommended for every patient.

Based on these results and your individual treatment history, you and your doctor can decide on whether using an alternative treatment to abacavir is important.

A Q&A sheet on these results was produced by the investigators and is on the i-Base site, after our report on this study:
http://www.i-base.info/htb/v9/htb9-1-2/Increased.html

http://www.i-base.info/htb/v9/htb9-1-2/Position.html

Ref: Sabin C et al. Abstract 957c.
http://www.retroconference.org/2008/Abstracts/33471.htm

4. Side effects: aging, bone disease

A plenary session on HIV and aging included a good overview by Bill Powderly. One aspect he included was bone health – highlighting that bone mineral density is lower in HIV-positive people.

We have much higher rates of osteopenia (no symptoms, not treated) and osteoporosis (symptomatic, requires treatment) than the general population. As bone problems increase with age, many researchers and advocates are concerned that bone health is not routinely monitored.

The session also included a presentation from Charles Flexner, suggesting that older people may get better responses from treatment (and potentially more side effects?) because they clear drugs more slowly, and therefore achieve and maintain higher drug levels.

Ref: Symposium: Aging and AIDS - Feb 5, 2008 4:00 PM
http://www.retroconference.org/2008/data/files/retro2008_frameset.htm

5. New medications

There are always studies at CROI about potential new drugs. Many of these are in very early stages of development. Generally, the most important new drugs have either just been licensed or are already available on special programmes in the UK (raltegravir, etravirine, darunavir and maraviroc).

One presentation on a new NNRTI called rilpivirine (TMC-278) showed the potential for a formulation based on nanotechnology, to be given by a once-monthly injection. [1] Another study looked at this for formulations of ritonavir, lopinavir and efavirenz. [2]

These are interesting, but probably won't be an option for several years.

Other pipeline drugs included CCR5 inhibitors (vicriviroc and SCH532706 from Schering), [3, 4] plus a range of pre-clinical studies on potential

nukes, NNRTIs, and moelcules that target new aspects fo the virus liefecycle. [5]

Ref:

1. van 't Klooster G et al. Abstract 134.
http://www.retroconference.org/2008/Abstracts/31749.htm

2. Destache C et al. Abstract 743.

http://www.retroconference.org/2008/Abstracts/30725.htm

3. Zingman B et al. Abstract 39LB.

http://www.retroconference.org/2008/Abstracts/33556.htm

4. Molina J-M et al. Abstract 37

http://www.retroconference.org/2008/Abstracts/31137.htm

5. See poster abstracts sessions 123 and 124.

http://www.retroconference.org/2008/Sessions/123.htm

http://www.retroconference.org/2008/Sessions/124.htm

6. Risk of sexual Hepatitis C reinfection in gay men in the UK

An oral presentation from a UK research group reported that a significant number of gay men who had previously been successfully treated for hepatitis C, later relapsed.

Comparing genetic samples of each virus from the first and second infections, the researchers showed that these were new sexual infections (and not flare-ups from the previous infection).

Ref: Jones R et al. Oral abstract 61LB.
http://www.retroconference.org/2008/Abstracts/33444.htm

This oral presentation is available to view online from the conference website (Monday 4 February).

7. Other studies about HIV and hepatitis C coinfection

Several other posters looked at HIV/HCV coinfection. Three studies looked at whether choice of HIV drugs could affect success of HCV treatment.

Two suggested that abacavir may reduce chance of success, especially in people with high HCV viral load, and that tenofovir may be linked to better outcome. [1, 2] One study found no difference. [3]

Another study reported that there may be no benefit from people continuing to use interferon maintenance therapy, if they have not responded to treatment. This is new, and supported by other recent studies, and is likely to change this current practice. [4]

References

1. Mira J, et al. Abstract 1074.
http://www.retroconference.org/2008/Abstracts/30917.htm

2. Gonzalez-Garcia J, et al. Abstract 1076.
http://www.retroconference.org/2008/Abstracts/32077.htm

3. Moreno A, et al. Abstract 1075.
http://www.retroconference.org/2008/Abstracts/32710.htm

4. Sherman K, et al. Abstract 59.
http://www.retroconference.org/2008/Abstracts/31871.htm

8. Very low rates of mother-to-child transmission in the UK

Only 3 cases of transmission in 1341 out of 2200 HIV-positive pregnancies in women on HAART whose viral load was <50 copies/mL (<0.01%).

This is the lowest reported HIV transmission rate and should provide very encouraging results for HIV-positive women considering having children. No differences in risk of transmission were seen between use of C-section or vaginal birth.

Ref: Townsend C et al. Poster abstract 653.
http://www.retroconference.org/2008/Abstracts/31135.htm

9. Prevention research

There were interesting overview presentations about transmission and also some new studies.
• New report about vaginal flora (lactobacillus) reducing viral load. [1]
• Studies reported that circumcision reduces transmission of some other STIs to female partners (genital ulcer disease, severe bacterial vaginosis and trichomonas) and reduced risk of men being infected with herpes. [2]
• However, there was no protective effect against catching HIV by treating herpes with acyclovir in a study run in heterosexuals in Africa and gay men in US and Peru [3]
• Microbicides: the increased risk of transmission seen in N-9 and cellulose suphate microbicide trials was explained by these compounds breaking down the protective epithelial (skin cell) barrier and increasing inflammation (increasing target cells). [4]

This should make future microbicide trials safer

and both maraviroc and tenofovir are much safer as potential microbicides from this perspective.

References
1. Hitti J et al. Abstract 27LB.
http://www.retroconference.org/2008/Abstracts/33511.htm

2. Tobian A et al. Abstract 28LB.
http://www.retroconference.org:8888/2008/Abstracts/33369.htm

3. Celum C et al. Abstract 32.
http://www.retroconference.org:8888/2008/Abstracts/31499.htm

4. Mesquita P et al. Abstract 26.
http://www.retroconference.org/2008/Abstracts/33156.htm

10. TB - drug resistant TB and HIV

A symposium on HIV/TB coinfection highlighted one of the most important health differences between rich and poor countries. [1]

Multidrug and extensive TB drug resistance (MDR- and XDR TB) in South Africa was highlighted as a 'catastrophic epidemic' in a presentation by Neel Ghandi showing that these were reinfections. with 17/19 patient dying within 14 days of an XDR diagnosis. [2]

An important US study (ACTG5164) on timing of ARV treatment in people with acute opportunistic infections and low CD4 counts, showed that delaying HIV treatment is associated with increased risk of complications and death.

This study is important, because patients (who were very sick, and therefore not usually studied) were randomised to immediate or deferred treatment (started an average of 2 vs 6 weeks after the OI was diagnosed).

1. Targetting TB: new opportunities and challenges
http://www.retroconference.org/2008/Sessions/033.htm
2. Andrews J et al. Abstract 143.
http://www.retroconference.org/2008/Abstracts/33266.htm
3. Zolopa et al. Abstract 142.
http://www.retroconference.org/2008/Abstracts/32805.htm

11. Vaccine research

Vaccine news was depressing but also probably realistic. Two main lectures provided a frank account of why a vaccine is unlikely for many years, if at all.

These can be viewed on-line (the first one is much less technical):

Ref; Plenary Feb 5, 2008 11:30
Scientific Obstacles to an Effective HIV Vaccine - Ronald Desrosiers
AIDS Vaccine at the Crossroads - Neal Nathanson
http://www.retroconference.org/2008/data/files/retro2008_frameset.htm

12. And the cure….?

An interesting poster reported on an HIV-positive man who received a stem cell transplantation, from a donor who was immune to HIV infection - ie from someone who had the CCR5 delta-32 deletion.

They discontinued his HIV drugs at the same time as the transplant. After two months his viral load became undetectable – and has stayed this way (RNA, DNA, in plasma, rectal and bone tissue) for a further six months.

Following this patient for longer is essential. This is still too early to make very much from one case. Even so, viral load is usually very responsive, so these results are very interesting. Even if this works, it is unlikely to become a treatment with current technology – because of the difficulty of matching donors and the costs and complications of stem cell transplantation.

It is, however, an indication of the direction that gene therapy is looking at, and it is good to know about the range of research that is still searching for a cure.

Ref: Hutter G et al. Poster abstract 719.

http://www.retroconference.org/2008/Abstracts/31704.htm

For more information about any of these studies, call the i-Base information phoneline.

0808 800 6013
Mon, Tues, Wed 12.00 noon – 4pm
All calls are free and in confidence.

or email:

questions@i-Base.org.uk

PUBLICATIONS & SERVICES FROM i-BASE

i-Base website

The fully searchable website is designed to be fast to access, easy to use, and simple to navigate.

http://www.i-Base.info

All i-Base publications are available online, including editions of the treatment guides.

It can be used to order publications and regular subscriptions to be delivered by post or email (as PDF files).

The site also includes a web-based Q&A section for people to ask questions about their own treatment:

http://www.i-base.info/questions/index.html

Non-technical guides to treatment

i-Base produce five non-technical guides to treatment. All guides are available in print, PDF and online formats:

http://www.i-Base.info/guides

- **Introduction to combination therapy**
- **Guide to hepatitis C for people living with HIV: testing, coinfection, treatment and support**
- **Guide to changing treatment: what to do when your treatment fails**
- **Guide to HIV, pregnancy & women's health**
- **Guide to avoiding & managing side effects**

Translations of i-Base guides

Original material published by i-Base can be translated and reprinted, and has so far been produced in over 30 languages, including:

Bosnian, Bulgarian, Chinese, Czech/Slovak, Croatian, French, Greek, Hindi, Indonesian, Italian, Kosovo, Macedonian, Nepali, Polish, Portuguese, Romanian, Russian, Serbian and Spanish.

More information about this process is available on the i-Base website.

In addition, PDF files of some of the translated publications are available on the i-Base site.

Some of these translations are from earlier editions of the treatment guides, so check the publication date before relying on all information.

http://www.i-base.info/about/downloads.html

Treatment 'Passports'

These popular booklets are for HIV-positive people - whether newly diagnosed or positive for a long time - to keep a record of health and treatment history. Like all i-Base publications, they are available free as single copies, or in bulk.

HIV Treatment Bulletin (HTB)

A review of the latest research and other news in the field. HTB is published 10 times a year in a printed version, in a pdf file that we can email to you, and on our website.

The printed version is available at most HIV clinics in the UK and is available free by post.

Treatment information request service - 0808 800 6013

i-Base offers specialised treatment information for individuals, based on the latest research.

We can provide information and advice over the phone, and we can mail or email copies of the latest research studies relevant to the caller.

For further details, call the i-Base treatment information free phone line on 0808 800 6013. The line is usually staffed by positive people and is open Mondays, Tuesdays and Wednesdays from 12 noon to 4pm. All calls are in confidence and are free within the UK.

Online Q&A service

A new 'question and answer' service has been added to the i-Base website. Questions can either be answered privately, or if you give permission, we will post the answers online (omitting any personally identifying information).

http://www.i-base.info/questions/index.html

Recent questions include:

- I kissed an HIV-positive man
- Will a bloated stomach on saquinavir/ritonavir improve?
- Why would test results change so much in a short time?
- How do I access treatment in the UK - I am from India?
- Recently diagnosed with HIV-2
- Can HIV cause a red face in the winter?
- What is the difference between HIV-1 and HIV-2?
- How accurate is the DUO test 27 days?
- Can I have a baby if I have AIDS?
- Can I do something to reduce the side effects?
- What is the longest late detection of HIV-infection?
- Chances of infecting partner with undetectable viral load?
- What are my Dad's chances of recovery?
- Why do some answers on i-Base use different words for similar testing questions?
- Is it true that HIV doesn't survive long outside the body?
- Can I take Atripla as a first line treatment?
- If you are infected by a viral disease, does that mean your CD4 counts are always low?
- Do you feel ok again after seroconversion?
- Do antibiotics interact with HIV meds?
- How long after a potential exposure can I donate blood?

- How is HIV transmitted by breastfeeding?
- What is seroconversion and what are the symptoms?
- Are enlarged lymph nodes painful, or related to HIV?
- Which test is used to detect an infection within 6 months?
- Can mouthwash or antibiotics affect HIV results from a mouth swab?

Assessing the treatment information needs African people in the UK living with HIV

This report by Winnie Sseruma and i-Base includes an analysis from workshops held last year and details African use and experience of current treatment information resources.

http://www.i-base.info/pdf/africantreatmentneeds.pdf

NEW: Training manual – revised, updated and now fully online

This training resource has been revised and updated and is now online in new format.

http://www.i-base.info/education/index.html

The Training Manual for Advocates provides entry-level curriculum relating to HIV and treatment.

It is made up of 8 modules for learning about aspects of HIV care has been updated and published online as an interactive resource. It provides entry-level curriculum relating to HIV and treatment.

http://www.i-base.info/manual/en/index.html

Sections include:

1. Immune system and CD4 count
2. Virology, HIV and viral load
3. Introduction to antiretrovirals (ARVs)
4. Side effects of ARVs
5. Opportunistic infections and coinfections
6. HIV and pregnancy
7. Drug users and HIV
8. Clinical trial design and the role of advocates
9. How to read science

Each module includes learning objectives, non-technical review material, test questions, an evaluation and a glossary.

We hope this will be useful for training advocates and other related healthcare workers as well as for HIV-positive people who want to know more about aspects of their healthcare.

The training manual was previously only available online as a PDF document and has been widely translated. Earlier editions are available in Russian, Portuguese, Hindi and Nepalese as are available as PDF files.

i-Base Book: "Why we must provide HIV treatment information"

Photography by Wolfgang Tillmans

i-Base has worked as a treatment literacy project for over six years. Over this time we have always produced copyright-free material and encouraged other organisations to use, translate and adapt our material. Through this work, we have been very lucky to develop links to many other advocacy projects outside the UK.

A recent meeting, held in Cape Town earlier this year, focused on how to raise the profile of treatment literacy. One result from the meeting is a publication "Why we must provide HIV treatment information".

With text provided by activists from 25 countries and 50 full colour photographs by Wolfgang Tillmans, this limited edition 100-page publication is being sold by i-Base to raise funds to help support our international treatment literacy projects.

UK CAB: reports and presentations

The UK Community Advisory Board (UK CAB) is a network for community treatment workers across the UK that has been meeting for three years. Each meeting includes two training lectures and a meeting with a pharmaceutical company or specialist researcher.

The CAB has a separate website, where reading material, reports and presentations from these meetings are posted.

http://www.ukcab.net

World CAB - reports on international drug pricing

Two reports from meetings between community advocates and pharmaceutical companies, that focused on pricing issues and global access to treatment, and that are now available online.

Both are available to download as a PDF file from the i-Base website.

http://www.i-base.info/wcab/index.html

Find HTB on AEGiS

AEGiS.org - the longest established and largest global resource of online HIV information - includes HTB in the regular journals that it puts online. You can find us at:

http://www.aegis.org/pubs/i-base/2007

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http//www.i-base.info/forms/index.htm

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