·GAYPOZ IRELAND·

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INSIDE THIS ISSUE

TREATMENT DECISIONS

PROTEASE INHIBITORS - UPDATE

ANTIRETROVIRAL ARSENAL

READING BLOOD COUNTS

HIV ADULT STANDARD OF CARE

QUESTIONS TO ASK ABOUT TREATMENT

HIV RELATED FATIGUE

LOW VITAMIN B12 ASSOCIATED WITH DISEASE PROGRESSION

MEDIA ROUND

SUPPORT FOR 1592

GPI ISSUE 9 EXCEEDS 450 COPIES

GPI IS COMPILED, WRITTEN AND EDITED BY DR. JOHN WILLIAMS.

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CANADA, U.S.A., AUSTRALIA, IRELAND, ENGLAND, FRANCE, HOLLAND.....

HIV ADULT STANDARD OF CARE

IF YOU HAVE RECENTLY TESTED HIV POSITIVE AT ANY LEVEL OF CD4 (T) CELLS, THE FOLLOWING TESTS AND EXAMINATIONS SHOULD BE PROVIDED BY YOUR DOCTOR OVER A SERIES OF CONSULTATIONS.

See glossaries on pages 3,10 & 11.

Special attention should be paid to the following:

A detailed medical history.
Skin, lymph nodes, eye, oropharynx, (mouth and throat) cardiopulmonary (heart and lungs), abdomen, genitourinary and anorectal (anal warts), neurologic.

Tests should include:

A full blood count
Including a CD4, CD8 and a CD4/CD8 ratio, (see page 3) liver function, neuro test, urine analysis, serum creatinine, and the average of two baseline viral load tests. A test for Toxoplasma (IgG) titer

Chest X-Ray (in some centres this is not routine).

Eye Examination:
Ophthalmic eye tests

Dental exam:
Visit a dentist to check for gum and tooth problems. Develop good regular dental care.

Psychological assessment:
Some new "seropositives" will need treatment for depression. Consider having follow-up counseling. Ask for advice on employment and welfare benefits.

A Syphilis Test:
TPHA (treponema pallidum haemagglutination test) or VDRL (venereal disease research laboratory test)

Gynecological (vaginal, pelvic, breast) exams:
Every six months. Get treated for candidiasis if present use a topical cream, or Diflucan if it does not respond. Consider diet changes (less dairy and sugar) and daily acidophilus.

Test for Tuberculosis
Skin tests will tell if there is a TB infection.

Consider:

Antiretroviral therapy:
Discuss carefully the option of treatment with combination drugs.

Flu vaccine:
Consider having a flu shot each October, and H. Influenza shot. Do not get a viral load test within 4-6 weeks of immunization shots.

Hepatitis B:
Consider a Hepatitis B vaccination 3-shot series.

Seek out advice on:

- HIV transmission
- available treatments for OIs
- re-infection
- preventing infections
- good nutrition
- complimentary therapies
- vaccinations
- healthy living
- information sources

Shingles:
This is caused by varicella zoster virus. Zoster can be an early symptom of HIV occurring 3-5 years before other OIs.

Smoking, drugs, alcohol
These are unhealthy, but do not seem to have a direct connection to long-term survival.

Questions to ask about antiretroviral treatment

1. What is the drug called?
2. What does it look like?
3. How often do I take it?
4. When do I take it?
5. Can I take it with food?
6. What side effects should I expect?
7. When are these likely to happen?
8. What can I do to deal with: nausea, vomiting, headache, tingling in hands or feet.
9. When should I discontinue the treatment?
10. When will I know the treatment is working?
11. Are there any drugs I have to avoid?
12. Do I need to be careful about drinking?
13. Where can I get further information?
14. How do I store my drugs? (the fridge/sealed container?)
15. How does this treatment affect my future options?
16. Can I speak to someone who is taking a similar combination of drugs?

GPI is here to help with these problems. Please contact us!

CD4 COUNTS

HIV infects the white blood cells called T-Cells . One type of T-Cell has a molecule on its surface which helps the HIV to attach itself to the T-Cell, allowing the virus to enter the cell. This surface molecule is CD4. (CD stands for cluster of differentiation and is a numerical system for classifying antigens on the surface of white blood cells).

Billions of HIV infected CD4 T-cells are destroyed in the body each day, and billions more are produced to replace them.

A normal CD4 count is between 600-1200 CD4 cells /mm^3.

In a positive person the CD4 count usually falls over time. The CD4 count coupled with viral load testing.helps to give an indication of your immune system status, and it can help to monitor the effectiveness of any antiviral drugs you are taking,
Factors which will affect your CD4 count include:
INFECTIONS, TIME OF DAY, SMOKING, STRESS. A single CD4 count maybe misleading. If you do not have any symptoms of HIV infection, it is normally suggested that your CD4 count is checked every three to six months. More frequent counts are advisable if you start combination drug treatment.

Try not to become obsessive about your CD4 counts. The test is best viewed as a tool for you and your treatment provider to use in making well informed treatment decisions. The present combination treatments are having an impact on well being, however CD4 counts are slower to recover under these treatments. Viral Load testing will give a more accurate picture as to how well a particular combination therapy is working.

Combination Therapy: Using more than one drug at a time.
Lymph nodes: Bean size organs located throughout the body where white blood cells and other immune cells gather.
OI: Oppurtunistic Infection.
Protease: An enzyme that HIV uses to break up large proteins into smaller ones from which HIV is made.
Reverse transcriptase: An enzyme which converts RNA into DNA.

BLOOD COUNTS

The full blood count (**FBC**) or complete blood count (**CBC**) will give the following readings. These are listed giving, an abbreviation, the meaning of that abbreviation and the normal expected range.

	WBC	
WHITE BLOOD CELLS		4.O - 11.0 10^9/l
	RBC	
RED BLOOD CELLS		4.5 - 6.5 10^{12}/l
	Hb	
HAEMOGLOBIN		13.5 - 17.5g/dl
	Hct	
HAEMATOCRIT		40 - 52% RATIO
	MCV	
MEAN CORPUSCULAR VOLUME		80 - 95 fl
	MCH	
MEAN CORPUSCULAR HAEMOGLOBIN		27 - 34 pg
	MCHC	
MCH CONCENTRATION		20 - 35 g/dl
	PLT	
PLATELETS		150 - 400 X 10^9/l.
	LYMP	
LYMPHOCYTES 1.5 - 3.5 X 10^9/l		20 - 45%
	MONO	
MONOCYTES 0.2 - 0.8 X 10^9/l		2 - 10%
	NEUT	
NEUTROPHILS 2.5 - 7.5 X 10^9/L		40 - 75%
	EOS	
EOSINOPHILS 0.04 - 0.44 X 10^9/L		1 - 6%
	BASO	
BASOPHILS 0.01 - 0.1 X 10^9/l.		0 - 1%

Anaemia: A drop in the Hb (Haemoglobin) level. This can cause fatigue and breathlessness. It can be caused by OIs or certain drugs e.g. AZT.
Hct (Haemocrit): This indicates the oxygen carrying capacity of the blood.
Neutrophils: A drop in these white cells, neutropenia, can increase the risk of bacterial and fungal infections. The side effects of AZT and ganciclovir can be neutropenia.
Platelets: These are needed for blood clotting. A shortage (thrombocytopenia) can result in bruising and bleeding.
Lymphocytes: Increased in viral infections (CMV, Toxo.), decreased in steroid therapy or radiotherapy.
High MCV can be caused by Vit B12 or folate deficiency or hepatitis. A **low MCV** can be caused by iron deficiency anaemia.

21 - 33

TIPS 1 - 11 APPEARED IN ISSUES 7/8

TIPS 12 - 20 APPEARED IN ISSUE 9

survival tips

21. SOME DRUGS MAKE LIFE EASIER. INSIST ON THEM IF YOU HAVE A NEED.
Certain drugs help to eliminate nausea, pain, anxiety, fear and give you a good night's rest. These drugs can help to improve the quality of your life. They are important allies to help you manage these issues but should only be used as part of the solution.

22. WHEN YOU ARE HOSPITALISED, STAY IN THE DRIVERS SEAT.
There is only one person in hospital, more powerful than a doctor. It is you, the patient. You have the right to ask for and receive explanations.

23. DON'T TELL EVERYONE YOU ARE IN HOSPITAL.
When you are in hospital, you are there to heal. Too many visitors can be tiring.

24. BRING COMFORT ITEMS TO THE HOSPITAL.
A good book, your phone book, the TV guide. Borrow a phone. Take something special.

25. MAINTAIN GOOD BASIC HYGIENE.
Use an antibacterial hand soap. Good oral hygiene is important, get to a dental hygienist at least twice a year.

26. IF A SUPPORT GROUP IS DEPRESSING - STOP GOING.
Support groups can increase your problems. Chose carefully !

27. YOU NO LONGER"HAVE TO" GO ANYWHERE.
Some occasions maybe stressful and tiring. Don't go out of a sense of obligation.

28. IF YOU DON'T HAVE FUN, DON'T GO!
If you are going somewhere just for the sake of it - think again.

29. COPY THIS FOR FRIENDS IN NEED.
If you want a full copy of the survival tips for others write/phone/e-mail GPI.

30. HAVE A LIFE APART FROM AIDS.
There are times when AIDS is all-consuming. You need something to take your mind off AIDS issues for a while. Create an AIDS-free zone in your home.

31. LET OTHER PEOPLE ACCESSORIZE WITH RED RIBBONS.
It's great to see other people wearing red ribbons, they are usually compassionate types. I don't need the reminder.

32. DON'T GIVE UP ON LOVE.
Try and overcome your fears around HIV and follow your heart. Love does conquer all. (despite the cliché)

33. CHERISH AND NURTURE HOPE.
Hope keeps you alive. Everyone needs it. Don't take hope away from anyone. Treatments are getting better, the cure is getting closer. Lets hope we are all here when it arrives.

Please add to our survival tips by writing to: GPI, PO Box 5187, Dublin 6.

GAY HEALTH NETWORK

The Gay Health Network (GHN) meeting held on 18 January 1997 was attended by representation from GPI. This is the first GHN meeting that GPI has attended. The meeting helped to bring the actual issues, rather than those perceived issues, before other Gay groups. GPI pointed out that positive people had received little from HIV/AIDS organisations other than free condoms. The divisions between gay positive people, gay people and the broad community were highlighted. It was agreed that GCN would be encouraged to provide more in depth coverage of HIV/AIDS issues. The meeting was attended by representatives from The Rainbow Project (Belfast), Southern Gay Health Project (Cork), AIDS Help West (Galway), GLEN, Dublin AIDS alliance , Cairde and the Gay Men's Health Project. This meeting was cited as being the most successful ever held by GHN. GHN is now in existence for nearly three years. The next GHN meeting will take place on 8 March.

TREATMENT DECISIONS

Paradoxically, the more treatment options are available, the harder the decisions seem to get. It will still be difficult to decide:

- when to start treatment

If you have :
1. low T-cells,
2. high viral load,
3. symptoms of illness and/or
4. you have had HIV disease for a long time, you should talk to your doctor about starting combination therapy. These combination treatments are proving very worthwhile. However, taking anti-HIV drugs will change your life. Think it through very carefully. Learn all you can about the available treatments, their dosing requirements and their side effects, before you make a decision.

There maybe a lifelong relationship between you and these drugs. Are you ready for that? The rules for taking the right amount of the drugs, at the right time, with the right food, can be complicated. If you don't think you can make this commitment you should not begin these drugs. If the drugs are not taken the right way the virus can become resistant. Take time to choose the right point in your life to make such a big change.

- with which combination to start

2 drugs are better than 1 and 3 are better than 2. The combination of 4, and 5 drugs have not been fully researched as yet. Some people prefer to begin with the most effective combination now, in the hope that it will work for at least a couple of years, by which point other options maybe come available. If it turns out that the virus can be eradicated, then hitting it as early as possible and as hard as possible for the 3 years (or 4, or 5) that it will take to get rid of it, seems a good choice. If HIV cannot be eradicated then waiting until the first signs of damage to immune response before loading up on the drugs, seems reasonable.

An initial combination of AZT, 3TC and Saquinavir is a reasonable choice. Saquinavir is the least potent of the protease drugs.
Other combinations include:

- AZT, 3TC and Indinavir
- AZT, 3TC and Ritonavir
- AZT, ddc and Saquinavir
- d4T, 3TC and Indinavir
- d4T, 3TC with Ritonavir and Saquinavir.

ddI can also be used in these combinations but it can be a little difficult to take considering its dosing requirements.

- what to switch to if initial therapy doesn't work or loses its effects

- what to switch to if the second combination fails, and so on...

These two questions are difficult to answer. If you consider the cross resistance chart from Issue 9, this will help with what options you can consider if you fail on a particular combination. The ideal is to change all three drugs if a combination fails, this is not always possible, due to the limited availability of drugs. If for example you began on the combination of AZT, 3TC and Saquinavir and failed then a reasonable choice would be to change to d4T, ddC and Indinavir. A failure on this combination gives a very limited choice. Possibly ddI, 1592 and Nelfinavir. (Nelfinavir and 1592 are not yet available) Please read the details on the various drugs to help formulate a clearer picture.

- what the results of virological tests mean for treatment decisions

Viral load testing can be used long with T-cell (CD4) counts to help monitor the status of HIV disease and predict its future course. A low value for viral load can indicate a slower disease progression.

Viral Load tests are reported as the number of HIV "copies" in a milliliter of blood. The Amplicor test can detect 200 RNA copies at the lower end and at the upper end 1,000,000. (The notation for reporting e.g. 10,000 copies will be as 10 to the power of 4, or 10^4). A high Viral Load - greater than 100,000 copies, indicates a higher risk of disease progression. A low viral Load - less than 10,000 copies, indicates that risk of disease progression is relatively low in the near future. An "undetectable" test result indicates that the test is not sensitive enough to find small amounts of virus.

Viral load tests can be used to determine when anti-viral therapy should be started and how effective the present combination anti-viral drugs are. Changes in medication can be considered with Viral Load test results.

Initially it is thought a good idea to have two tests at separate visits. This will give a reliable measure of the baseline HIV level. To evaluate anti-viral therapy, a viral load test should be carried out two to four weeks after it is started. As monitoring therapy a viral load test

continued on page 6.

continued from page 5.

TREATMENT DECISIONS

should be performed every three to four months to confirm that the anti-viral regime is effective. An illness or certain vaccinations can affect viral load test results.

If your viral load results rise consistently then it would seem wise to consider beginning treatment. When a combination treatment fails to improve your viral load then that combination must be changed. It is hoped that more refined testing (genotype) will determine exactly which drug is failing in a combination. This will prevent the present necessity for changing all three drugs where possible only a single drug needs to be replaced.

In less than one year, the options for managing HIV have more than doubled. This quick guide is to help to acquaint you with the various drugs and their different names; these brief descriptions cannot possibly be complete, and people with HIV must work with their doctors to be aware of the different possible side effects, and the other instructions which are essential for using these treatments correctly.

No anti-HIV drug should be used alone, given the ease with which HIV develops resistance. But much is still unknown about combination therapy, and most people must experiment intelligently with different combinations to see what will keep both their viral load and treatment-related toxicities as low as possible.

Important note: The side effects described for each entry below are only the most common or important ones. Doctors and patients should always be prepared for other toxicities.

Reverse Transcriptase Inhibitors

These drugs work by inhibiting an enzyme -- reverse transcriptase -- which the virus needs to replicate.

AZT, also called zidovudine, is marketed under the brand name Retrovir(R). AZT may work especially well in combination with 3TC, indinavir, or delavirdine. AZT is valuable for treating cognitive problems caused by HIV because it penetrates the central nervous system better than most of the other drugs. It can cause headaches and stomach upset, but these often go away after a couple weeks. Over extended periods of use, it can cause anemia (low production of red blood cells), neutropenia (low white cells) and myopathy (damage to muscle fibers). These problems resolve if the drug is discontinued. The usual prescription for AZT has been two capsules (200 mg) taken three times a day, but Glaxo-Wellcome will soon be offering a 300 mg capsule that can be taken twice daily.

ddI, also known as didanosine, is sold under the brand name VIDEX(R). ddI may work especially well with d4T or ddI. However, ddI, ddC, and d4T can each cause peripheral neuropathy and pancreatitis, so any combination of these drugs must be carefully monitored. If you experience abdominal pain or tingling and numbness in your toes or fingers call your doctor (clinic); otherwise, long-term damage may result. The usual prescription for ddI is two tablets (125 or 200 mg, depending on body weight) taken twice a day on an empty stomach with water.

ddC, also called zalcitabine, is sold as HIVID(R). ddC can be combined with any other antiretroviral, but must be used cautiously with ddI or d4T, since all three drugs can cause neuropathy or pancreatitis. If you experience abdominal pain or tingling and numbness in your toes or fingers, call your doctor; otherwise, long-term damage may result. The usual prescription for ddC is one tablet (0.75 mg) taken three times a day.

d4T, also known as stavudine, is marketed as Zerit(R). d4T can be combined with most other antiretrovirals and may work especially well with ddI or nevirapine. However, d4T must be used cautiously with ddI or ddC, since all three drugs can cause neuropathy and pancreatitis. If you experience abdominal pain or tingling and numbness in your toes or fingers, call your clinic; otherwise, long-term damage may result. The usual prescription for d4T is one capsule (30 or 40 mg, depending on body weight) taken twice a day.

3TC, also called lamivudine, is marketed as Epivir(R). 3TC can be combined with any other antiretroviral and may work especially well with AZT, d4T, ddC and a protease inhibitor. 3TC may resensitize HIV to AZT in people whose virus has become resistant to AZT. It can cause headaches and insomnia in some people, but these usually go away after a few weeks. The usual prescription for 3TC is one tablet (150 mg) taken twice a day.

The protease inhibitors are covered on page 10.

The Non-Nucleoside Reverse Transcriptase Inhibitors will be given in the next issue.

GPI INFORMATION SOURCES

GPI has links with over 600 positive people worldwide who help to provide this newsletter with information. GPI also relies on the following sources/publications to resource information.

AIDS Treatment News,
AIDS Treatment Update
AmFAR Treatment Directory Quarterly,
BETA (Bulletin of Experimental Treatments for AIDS)
CDC (Centre For Disease Control)
MMWR (Morbidity Mortality Weekly Review)
JAMA (Journal of the American Medical Association)
AIDS
PI (Project Inform),
POZ Magazine,
HIV Update,
(GMHC)Treatment Review
National Institute of Allergy and Infectious Disease (NIAID)
Glaxo Wellcome, Bristol-Myers Squibb, SmithKline Beecham, Roche.

If you wish to resource any of these organisations/newsletters/journals/companies mentioned, please contact GPI.

SPV-30 French Trial Results

SPV-30 has proven its antiretroviral effects as the results of trials from 16 infectious disease departments in French hospitals. SPV-30 has beneficial effects in HIV asymptomatic patients and appears to delay the progression of HIV disease. The hospitals which are taking part in this trial include the Pasteur Institute, Paris with Luc Montagnier. Details of SPV-30 are given in issue 9. SPV-30 is available from Arkopharma U.K. through GPI. The dosage is a 330 mg capsule three times a day. 90 capsules cost £23.00.

PCP

PNEUMOCYSTIS CARINII PNEUMONIA (PCP): IT IS A TYPE OF PNEUMONIA CAUSED BY A FUNGUS WHICH GROWS RAPIDLY IN THE LUNGS OF PEOPLE WITH AIDS. PCP PNEUMONIA IS THE LEADING CAUSE OF DEATH OF PEOPLE WITH AIDS, BUT IT IS BOTH TREATABLE AND PREVENTABLE. ANYONE WHO IS HIV POSITIVE SHOULD DISCUSS WHEN TO TAKE TREATMENTS THAT WILL PREVENT PCP WITH A DOCTOR.

PCP TREATMENT AND PREVENTION WILL BE COVERED IN THE NEXT ISSUE.

HIV/AIDS-related fatigue

HIV related tiredness is a result of a number of interactive causes, of which psychological distress and depression are just one aspect. Physical symptoms, drug side effects, sleep disturbances, malnutrition and wasting, AIDS dementia, hormonal insufficiency and muscular weakness (HIV- or AZT-related myopathy) all contribute to fatigue. The Memorial Sloan-Kettering study noted a small, but statistically significant association between fatigue and anemia (low oxygen transport by the blood). Do not accept fatigue as part of your condition, please consult your doctor if you are feeling abnormally tired.

1592

Thank you for your support.

1592U89 being developed by Glaxo Wellcome, is a nucleoside analogue drug (in the same general class as AZT). 1592 is much more effective than AZT in suppressing HIV. 1592 has good penetration across the blood-brain barrier. 1592 is also important because it is a new option for persons whose virus has already become resistant to AZT or other current drugs. Because of the schedule of clinical trials, 1592 is not expected to be approved in 1997. GPI are seeking a pre-approval expanded-access programme, especially for those with no other treatment options.

The following organisations are supporting GPI in this advocacy programme:

ACET
GUM Clinic Sligo General Hospital
GLEN
The Rainbow Project
Southern Gay Health Project
Gay Health Network
Gay Community News
AIDS Help West
Cairde
Red Ribbon Project
Cork AIDS Alliance
Dublin AIDS Alliance
Gay Switchboard.

GPI hopes that those who have not added their support would return their forms as soon as possible.

If you wish to add your support to GPI's call for pre-approval expanded access of 1592 from Glaxo you can obtain a form from: GPI, PO Box 5187, Dublin 6.

MEDIA ROUND

"Whey to Go"

POZ (02/97)

Whey, a component of milk, is a popular diet supplement among AIDS patients because it improves weight gain and rovides a protein-rich energy boost while containing little lactose. Laboratory studies have shown that a new whey protein concentrate, called Immunocal, can inhibit HIV replication while also stimulating the production of glutathione, an amino acid that helps control progression of the virus. Small trials of the treatment in HIV-positive children and adults have demonstrated its benefit.

"Suicide Is Found Common in Advanced AIDS Cases"

New York Times (02/97)

A survey of AIDS doctors in San Francisco reveals physician-assisted suicide has been a common alternative for AIDS patients. The survey, which was conducted from November 1994 to January 1995, found that 53 percent of 118 respondents had assisted in a patient's suicide. Assisting in suicide was defined as "prescription of a lethal dose of narcotics to a patient." The results appear in an article written by five San Francisco medical professionals in today's issue of the New England Journal of Medicine.

Catholic Church Resists San Francisco's Gay Agenda

Wall Street Journal (02/97)

Archbishop William J. Levada, leader of San Francisco's 200,000 Roman Catholics, is fighting a new policy that requires companies that receive city contracts to extend the same benefits to employees' domestic partners as they do to their spouses. Levada contends that religious groups should be exempted because the policy violates the church's moral code. One such group is Catholic Charities, a nonprofit organization that receives $5.6 million in city contracts and serves 70,000 people, including AIDS patients. "We are the largest provider of HIV housing and services on the West Coast," said organization spokesman Bob Nelson. San Francisco Mayor Willie Brown has said that if the organization does not comply with the new law, it should "relinquish its funding so that other nonprofits can do their work."

"REPORT CHARGES 'COVER-UP' BY CANADA'S BLOOD OVERSEERS"

Transcripts and audiotapes of meetings of the Canadian Blood Committee held during Canada's tainted blood scandal were destroyed to protect governments and the Red Cross from public scrutiny and responsibility, according to Information Commissioner John Grace. In a report released on Jan. 22, Grace claimed that the material was destroyed two weeks after a reporter requested the documents. Grace contends that Jo Hauser, former Committee executive director, proposed the destruction of the records, which occurred at the "direction" of Committee board members. The Committee was responsible for Canada's blood system and Red Cross funding during the 1980s, when some 1,200 Canadians were infected with HIV through tainted blood and blood products. **Lancet 2/97 No.349.**

Vitamin B-12 Deficiency Linked to Accelerated AIDS

HIV-positive men seem to develop AIDS more quickly if they are deficient in vitamin B-12, Johns Hopkins University researchers reported Friday. Among 310 homosexual and bisexual men infected with HIV, those with adequate levels of the vitamin did not progress to AIDS for about eight years, compared to four years for those with deficient vitamin levels. The researchers, led by Dr. Alice M. Tang, also found that vitamin B-6 and folic acid had no similar association with disease progression. Tang said that further study was needed to confirm the link and to "see if improvement in the levels of nutrients like B-12, with vitamin supplements, delays disease progression." The study results were published in the February issue of the Journal of Nutrition. **Chicago Tribune (2/07)**

GLOSSARY
M - N

M

MAC: See mycobacterium avium complex.

macrophage: A large immune system cell that roams through the blood looking for foreign matter. These cells also alert the rest of the immune system that help is needed.

magnetic resonance imaging (MRI): A non-invasive diagnostic technique that can provide information on the form and function of internal tissue and organs of the body.

maintenance therapy: Use of a treatment or treatments even after the disease has been brought under control. Unless maintenance therapy is used against PCP pneumonia, for example, the disease will probably occur again.

malabsorption syndrome: Decreased intestinal absorption resulting in loss of appetite, muscle pain and weight loss.

malignancy: A tumor or cancer.

memory cells: T cells that have been exposed to specific antigens and are able thereafter to proliferate upon repeat exposure to the same antigens.

meningitis: Inflammation of the brain and spinal cord that is usually caused by bacteria or a virus.

microsporidiosis: An infection of the gut caused by a parasite. The main symptom is diarrhoea.

molluscum contagiosum: A skin disease caused by a virus which causes small rounded tumors. They are persistent but have no other general symptoms. (OI)

monoclonal antibodies: Custom made immune system pieces that are used against one specific disease causing agent.

MRI: See Magnetic Resonance Imaging.

myalgia: Pain in one or more muscles.

mycobacterium avium complex (MAC): A disease caused by an organism found in soil and dust particles. In PWAs, it can spread through the bloodstream to infect many parts of the body. Symptoms of MAC include prolonged wasting, fever, fatigue and enlarged spleen. It is usually found only in individuals who have T cells under l00. Though there is no cure, many different combinations of drugs are used to treat MAC. Also called MAI sometimes.

mycosis: Any disease caused by a fungus.

myelopathy: Neurologic disorder. Symptoms can be weakness of limbs, partial paralysis, inability to control legs, frequent urination and inability to get erections.

myelosuppression: The suppression of bone marrow activity, which can cause anemia. Red blood cells, whose function is to transport oxygen to tissues and to remove their carbon dioxide waste, are constantly made in the bone marrow. A drug that damaged the bone marrow would cause loss of red blood cells.

N

natural killer cells: (NK cells) Large immune system cells that attack and destroy infected and cancer causing cells. They are known as 'natural' killers because they attack without any help from the rest of the immune system.

neoplasm: An abnormal and uncontrolled growth of tissue; a tumor.

neopterin: A substance produced by macrophages when they encounter a foreign substance such as a virus. Doctors sometimes measure neopterin to see whether the immune system is fighting HIV.

nephrotoxic: Poisonous to the kidneys.

neuropathy: Any abnormal, degenerative or inflammatory state of the peripheral nervous system.

neutropenia: A low number of neutrophils in the blood. Neutrophils are white blood cells important in defending the body against infections.

neutrophil: A white blood cell which plays a central role in the immune system. Neutrophils are the immune system's main defense against bacterial infections.

night sweats: Extreme sweating which happens during sleep. Night sweats are considered a symptom of HIV only when the body is drenched. Slight sweating is not a symptom.

NK cells: See natural killer cells.

non-Hodgkin's lymphoma (NHL): A rare B-cell lymphoma (see issue 9) that is seen in AIDS.

A FULL GLOSSARY IS AVAILABLE FROM GPI FOR £3.00 (INCLUDING POSTAGE).
TO ORDER YOUR COPY WRITE TO:
GPI, PO BOX 5187, DUBLIN 6.

THE GLOSSARY CONTINUES IN THE APRIL ISSUE.

THE PROTEASE INHIBITORS

Johns Hopkins' (School of Public Health) general guidelines for protease inhibitors:

1. **Never use monotherapy.**
2. **Don't add a protease inhibitor to a failing regimen.**
3. **Use full dose therapy.**
4. **Emphasize adherence.**
5. **Think about drug interactions.**

WHAT ARE PROTEASE INHIBITORS ?

These are anti-retroviral drugs that block the HIV-proteinase enzyme which plays a central role in viral replication. Studies with these drugs show that they can lower viral load and raise T-cells (CD4 cells).

WHEN SHOULD YOU CONSIDER TAKING A PROTEASE INHIBITOR?

If you have :

1. low T-cells,
2. high viral load,
3. symptoms of illness and/or
4. you have had HIV disease for a long time, you should talk to your doctor about starting a protease combination.

Saquinavir

(Roche's Inverase), the least potent of the protease drugs, has lower bioavailability (4%)--we await a new formulation which is promising increased bioavailability (16%). Coadministration with ritonavir increases blood levels, but even as it is being used in a number of practices, we need more data on toxicity and dosage reductions. Grapefruit concentrate and ketoconazole also raise levels. Even with low bioavailability, some users are getting good results--undetectible viral loads. The dose is three capsules (600 mg) three times daily, with meals.

Ritonavir

(Abbott's Norvir) is highly potent in raising CD4 counts, dropping viral load and decreasing morbidity and mortality. It comes in 100 mg capsules which should be taken with meals and also kept refrigerated, although single capsules can be carried for up to 12 hours at room temperature. It is poorly tolerated, with half of all users describing gastrointestinal trauma and dropping the drug especially during the first month--now gradual dose escalation from 5 to 14 days is recommended. Interactions with many drugs commonly used by PWAs are a further problem--examine list of all coadministered drugs carefully. Cross-resistant with indinavir--but at extremely low viral loads, who knows?

Having an HIV-experienced doctor correlates with better quality of life and better survival rates.

Indinavir

(Merck's Crixivan) is highly potent (in practice, start a new retroviral combination, like AZT/3TC or d4T/3TC, when adding protease). Indinavir drops viral loads to the undetectable range for 48 weeks and possibly much longer in virtually all persons studied. Indinavir should be administered as two 400 mg capsules every 8 hours, at least 2 hours after eating (especially high-fat or high-protein meals) or 1 hour before eating. Persons should drink at least 2-4 liters of fluids per day to avoid kidney stones. The indinavir-AZT-3TC combination has relatively low toxicity, high potency and lower cost than other combos, but indinavair may be highly cross-resistant with ritonavir. This combination may be considered in high-risk occupational exposures to HIV.

Nelfinavir

(Agouron's computer designed drug Viracept) should be available this year, with good efficacy and "loose stools" as its main side effect.

We anxiously await the Vertex protease inhibitor with its somewhat different resistance profile and Glaxo-Wellcome's new nucleoside analogue: 1592U89 which crosses the blood-brain barrier in rats and monkeys, and has shown good effects with AZT, 3TC, ddI, ddC and 2 protease inhibitors.

Glossary:

Antiretroviral: A substance that stops or supresses the activity of a retrovirus such as HIV. AZT, 3TC are examples of antiretroviral drugs.

Bioavailability: The extent to which an oral medication is absorbed by the digestive tract and reaches the blood stream.

HIV: Human Immunodeficiency Virus, the retrovirus which causes AIDS.

Morbidity: The state of being diseased.

Viral Load: A measure of the number of viral particles (usually HIV) in a sample of blood plasma.

John Williams.

4th Conference on Retroviruses and Opportunistic Infections

22 January - 25 January 1997 Washington D.C.

GPI has summarized the main points which were covered at this conference.

1. VIRAL ERADICATION

David Ho (Aaron Diamond AIDS Research Centre, New York) admitted that his work is theoretical regarding the eradication of the HIV virus, and that no one has cleared the virus as yet.

However, all the data so far show that the model works. So it would appear that the new anti-HIV drug combinations can wipe out 90% of the virus in the body within a couple of weeks, and thereafter the reduction is slower as infected cells die off, and virus that is trapped by lymph cells (follicular dendritic cells) is released.

What is not known is whether there are additional, hidden "compartments" or "sanctuary sites" where the virus can hide out, to re-emerge when drug therapy stops. Also, pro-viral DNA -- the viral genetic code, reverse-transcribed into a DNA strand -- seems to persist. It is not yet clear if this means new virus could be produced.

2. WHAT DRUGS TO BEGIN TREATMENT WITH ?

In many studies, there was a similar pattern: the harder the virus was hit, the better the results. That is, 2 drugs are better than one, and 3 are better than 2. The data has yet to emerge on 4- and 5-drug combinations, which some researchers are trying.

Another clear pattern, which emerged, was that people who hadn't used antivirals before (drug naive) almost always did better than those with prior antiviral experience. This would appear to imply that it is important to get the drug combinations right when first beginning drug therapy. Once it is decided to treat with antivirals the virus should be hit as hard as possible. If drugs are then changed, it seems to make sense to change more than one drug, if that can be done without using up the available choices.

The *Hit it Hard* notion seems to bear truth. As for *Hit it Early*, this maybe a little less certain. If it turns out that the virus can be eradicated, then yes, hit it as early as possible and as hard as possible for the 3 years (or 4, or 5) that it will take to get rid of it. If we CAN'T eradicate HIV then why not wait until the first signs of damage to immune response before loading up on the drugs?

And, if it turns out we can develop reliable means to restore immune function, that will mean there's even less risk in waiting until the antiviral drugs are needed. But we aren't there yet.

3. RESTORING IMMUNE FUNCTION

A lot of researchers talked about CD4 counts, or naive and memory T-cells as measures of *restored immune function*. It seems that there is so much we DON'T know about immune function that these cell counts do not prove a lot. However there are more and more clinical studies that show people are not developing opportunistic infections, and even that some people WITH opportunistic infections are recovering from them. So it would seem that the body may be able to restore some immune function when it doesn't have to focus on HIV.

Further studies in this area are promised very soon. Until these further results are available, it would seem imprudent to stop prophylaxis (preventive drugs) for MAC,or PCP, or other OIs. But there should be more information regarding these issues soon!



4. THE NEW DRUGS ARE WORKING

Not only do the multi-drug combinations improve survival, and reduce the amount of disease in people with HIV -- they actually can reduce overall health care costs! Early studies of the impact of protease-inhibitor combination therapies from the US and France showed that the cost of using the new drugs was more than offset by reduced hospital use.

5. BUT THERE ARE STILL IMPORTANT LONG-TERM QUESTIONS

The results to date are very impressive. But still, no one has been on any protease inhibitor drug for more than about 3 years. More data is needed on the long-term and combined effects of multi-drug antiviral therapy.

6. AN AREA OF CONCERN

Some of the new drugs -- especially protease inhibitors and non-nucleoside reverse transcriptase inhibitors -- have significant effects on the absorption of other drugs. But all of the drug interaction studies seem to be done on pairs of drugs: How does drug A affect the absorption of drug B, and vice versa. There were no apparent studies on how drugs A, B, and C are absorbed when they're given as a combination therapy. The data from the pair-wise comparisons show that there is pretty high variation from person to person. More research is really needed in this area.

Continued Page 12

2017.21.5.1.1184

CONTINUED FROM PAGE 11

Right now, if someone's viral load goes up when they're taking an anti-HIV drug combination, the instant conclusion is that the patient failed to comply with the dosing regimen, rather than considering the fact that their body chemistry could differ from the expected average, causing one or more of the drugs to be absorbed at lower levels (?) In other areas of medicine, drug dosages are personalized. This is complicated, and requires a period of blood sampling and testing for drug levels to ensure therapeutic effect. Maybe this needs to be implemented in HIV antiviral therapy.

There were many other areas covered in the course of this conference. There are more drugs in the pipeline, but most of the reports on them were VERY preliminary.

The closest drugs to approval are Viracept, the protease inhibitor from Agouron, and 1592U89, the reverse transcriptase inhibitor from Glaxo, and delavirdine, an NNRTI. There are more in development, and new classes of drugs (antisense drugs, integrase inhibitors) are being looked at. The somewhat negative focus on viral eradication overshadowed a large amount of encouraging news from this conference.

For further information contact: GPI

DUBLIN AIDS ALLIANCE INFORMATION EVENINGS

Dublin AIDS Alliance information evenings continue on Tuesday 25th February at 7 PM with "Drug Treatment Updates", given by Dr. G. Sheehan and on March 25th the topic will be "Complimentary Therapies". For further information please contact: Beth Wallace, Dublin AIDS Alliance, 53 Parnell Square, Dublin 1. Ph. 8733799.

When to start antiretroviral therapy

This is a very difficult question, but a practical consensus does seem to be building around starting "when the patient is ready." In other words, there are biological reasons to start anti-HIV treatment as early as possible; but if a person is not ready to follow the regimen, the drugs will do more harm than good because that patient will be likely to develop resistant virus, and lose most of the benefit of some important drugs forever. The resistant viruses can also be transmitted to others.

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IN THE APRIL ISSUE
PCP/MAC PROPHYLAXIS STANDARD OF CARE WITH CD4 BETWEEN 200 AND 100

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Statement of Purpose

GPI reports on experimental and standard treatments, especially those available now. We interview physicians, scientists, other health professionals, and persons with AIDS or HIV; we also collect information from meetings and conferences, medical journals, and computer databases around the world. Long-term survivors have usually tried many different treatments, and found combinations which work for them. GPI does not recommend particular therapies, but seeks to increase the options available.

FOR FURTHER INFORMATION WRITE TO:

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GPI wishes to thank Glaxo Wellcome for their donation to the newsletter.