Hospital Pharmaceuticals Review

PTAC, Hospital Pharmaceuticals Subcommittee, Transplant Immunosuppressant Subcommittee and Cancer Treatments Subcommittee minutes for web publishing

Oncology Agents and Immunosuppressants therapeutic group

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This document contains minutes relevant to the consultation document of 25 February 2013 relating to products in the Oncology Agents and Immunosuppressants therapeutic group.

Note that this document is not a complete record of the relevant PTAC and Subcommittee meetings; only the relevant portions of the minutes relating PTAC and its Subcommittees advice on the review of Hospital Pharmaceuticals are included.

Contents

Hospital Pharmaceuticals Subcommittee – 6 March 2012

1 Chemotherapeutic Agents (Alkylating Agents)

1.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Alkylating Agents) heading.

1.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule, either as Pharmaceutical Cancer Treatments or community pharmaceuticals, and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Busulphan
  - Tab 2 mg
- Carmustine
  - Inj 100 mg
- Chlorambucil
  - Tab 2 mg
- Cyclophosphamide
  - Tab 50 mg
  - Inj 1 g
  - Inj 2 g
- Ifosfamide
  - Inj 1 g
  - Inj 2 g
- Lomustine
  - Cap 10 mg
  - Cap 40 mg
- Melphalan
  - Tab 2 mg
  - Inj 50 mg
- Thiotepa
  - Inj 15 mg

1.3 The Subcommittee noted that busulphan injection (60 mg ampoule) is not widely used in DHB hospitals as a cancer treatment, but that it is a standard treatment for conditioning in bone marrow transplantation (BMT), and recommended that it be included in a national PML.

1.4 The Subcommittee recommended that busulphan injection be limited to use for BMT conditioning.

1.5 The Subcommittee noted that carmustine implant (7.7 mg) is not funded as a PCT, but has regularly been funded under Cancer Exceptional Circumstances for glioma patients. The Subcommittee recommended that this be funded as a PCT and included in a national PML for this purpose.

1.6 The Subcommittee recommended that carmustine, chlorambucil, ifosfamide and lomustine be restricted in a national PML to use as cancer treatments only.

2 Chemotherapeutic Agents (Anthracyclines and Other Cytotoxic Antibiotics)

2.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Anthracyclines and Other Cytotoxic Antibiotics) heading.

2.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Bleomycin sulphate
  - Inj 15,000 iu (10 mg)
- Dactinomycin (actinomycin D)
  - Inj 0.5 mg
- Daunorubicin
  - Inj 2 mg per ml, 10 ml
  - Inj 5 mg per ml, 4 ml
- Doxorubicin
  - Inj 10 mg
  - Inj 50 mg
  - Inj 100 mg
  - Inj 200 mg
- Epirubicin
  - Inj 2 mg per ml, 5 ml
  - Inj 2 mg per ml, 25 ml
  - Inj 2 mg per ml, 50 ml
  - Inj 2 mg per ml, 100 ml
- Idarubicin hydrochloride
  - Cap 5 mg
  - Cap 10 mg
  - Inj 5 mg
  - Inj 10 mg

2.3 The Subcommittee recommended that dactinomycin, daunorubicin, epiburicin and idarubicin be restricted in a national PML to use as cancer treatments only.

2.4 The Subcommittee noted that there had been some funding of liposomal daunorubicin under Cancer EC, and recommended that the Cancer Treatments Subcommittee be asked to consider this product.

2.5 Members noted that pegylated liposomal doxorubicin had previously been funded through Cancer EC for HIV-related Kaposi's sarcoma, but noted that this is not currently available due to an international stock shortage. The Subcommittee considered that funding for this could continue to be managed through an exceptions process.

3 Chemotherapeutic Agents (Antimetabolites)

3.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Antimetabolites) heading.

3.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Capecitabine
  - Tab 150 mg
  - Tab 500 mg
- Cladribine
  - Inj 1 mg per ml, 10 ml
  - Inj 2 mg per ml, 5 ml
- Cytarabine
  - Inj 100 mg
  - Inj 100 mg per ml, 5 ml
  - Inj 100 mg per ml, 10 ml
  - Inj 100 mg per ml, 20 ml
- Fludarabine phosphate
  - Tab 10 mg
  - Inj 50 mg
- Fluorouracil sodium
  - Inj 25 mg per ml, 100 ml
  - Inj 50 mg per ml, 10 ml
  - Inj 50 mg per ml, 20 ml
  - Inj 50 mg per ml, 50 ml
  - Inj 50 mg per ml, 100 ml
- Gemcitabine hydrochloride
  - Inj 200 mg
  - Inj 1 g
- Irinotecan
  - Inj 20 mg per ml, 2 ml
  - Inj 20 mg per ml, 5 ml
- Mercaptopurine
  - Tab 50 mg
- Methotrexate
  - Inj 2.5 mg per ml, 2 ml
  - Inj 25 mg per ml, 2 ml
  - Inj 25 mg per ml, 20 ml
  - Inj 100 mg per ml, 10 ml
  - Inj 100 mg per ml, 50 ml
- Thioguanine
  - Tab 40 mg

3.3 The Subcommittee recommended that the listing of capecitabine, gemcitabine and irinotecan in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

3.4 The Subcommittee recommended that cladribine, cytarabine and thioguanine be restricted in a national PML to use as cancer treatments only.

3.5 The Subcommittee noted that clofarabine has been used in paediatrics for acute myeloid leukaemia (AML) and acute lymphocytic leukaemia, members also noted that

an adult AML clinical trial was underway. Members recommended that the Cancer Treatments Subcommittee be asked to consider this product.

3.6 The Subcommittee noted that there has been some use of gemcitabine and irinotecan in paediatrics, and recommended that the Cancer Treatments Subcommittee be asked to consider whether this use was in line with the current Special Authority restrictions for these agents, or whether amendments would be required to provide for paediatric use.

4 Chemotherapeutic Agents (Other Cytotoxic Agents)

4.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Other Cytotoxic Agents) heading.

4.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Amsacrine
  - Inj 75 mg
- Anagrelide hydrochloride
  - Cap 0.5 mg
- Arsenic trioxide
  - Inj 10 mg
- Bortezomib
  - Inj 1 mg
  - Inj 3.5 mg
- Colaspase (L-asparaginase)
  - Inj 10,000 iu
- Dacarbazine
  - Inj 200 mg
- Etoposide
  - Cap 50 mg
  - Cap 100 mg
  - Inj 20 mg per ml, 5 ml
- Etoposide phosphate
  - Inj 100 mg (of etoposide base)
- Hydroxyurea
  - Cap 500 mg
- Mitomycin C
  - Inj 2 mg
  - Inj 5 mg
  - Inj 10 mg
- Mitozantrone
  - Inj 2 mg per ml, 5 ml
  - Inj 2 mg per ml, 10 ml
  - Inj 2 mg per ml, 12.5 ml
- Pentostatin (deoxycoformycin)
  - Inj 10 mg
- Procarbazine hydrochloride

    - Cap 50 mg
- Temozolomide
    - Cap 5 mg
    - Cap 20 mg
    - Cap 100 mg
    - Cap 250 mg
- Teniposide
    - Inj 10 mg per ml, 5 ml
- Thalidomide
    - Cap 50 mg
    - Cap 100 mg
- Tretinoin
    - Cap 10 mg

4.3 The Subcommittee recommended that amsacrine be limited to use for acute myeloid leukaemia.

4.4 The Subcommittee recommended that the listing of anagrelide, bortezomib and temozolomide in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

4.5 The Subcommittee recommended that arsenic trioxide, colaspase, etoposide injection, etoposide phosphate, mitotane, mitozantrone, pentostatin, procarbazine and teniposide be restricted in a national PML to use as cancer treatments only.

4.6 The Subcommittee recommended that the listing of thalidomide in a national PML be subject to restrictions on its use that are in line with the Special Authority restriction for it in the Pharmaceutical Schedule, with an additional provision to include the treatment of leprosy.

4.7 Members noted that there is potential for mitozantrone to be used in the treatment of multiple sclerosis. The Subcommittee considered that this indication should not be included in a national PML without a funding application being considered by PTAC.

4.8 The Subcommittee noted that there is some use of crisantaspase and pegaspargase in DHB hospitals, primarily in paediatrics. The Subcommittee recommended that the Cancer Treatments Subcommittee be asked to review these agents.

4.9 The Subcommittee noted that there has been some use of topotecan for Ewing's sarcoma under Cancer EC, and recommended that the Cancer Treatments Subcommittee be asked to review topotecan for this indication.

4.10 Members noted that the Cancer Treatments Subcommittee had recently recommended that mitotane be listed as a PCT, and recommended that it should be included in a national PML if this occurs.

4.11 The Subcommittee noted that pemetrexed has been funded through Cancer EC for a number of patients with mesothelioma due to non-occupational exposure to asbestos, while cases due to occupational exposure were typically funded through ACC.

5 Chemotherapeutic Agents (Platinum Compounds)

5.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Platinum Compounds) heading.

5.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Carboplatin
  - Inj 10 mg per ml, 5 ml
  - Inj 10 mg per ml, 15 ml
  - Inj 10 mg per ml, 45 ml
  - Inj 10 mg per ml, 100 ml
- Cisplatin
  - Inj 1 mg per ml, 50 ml
  - Inj 1 mg per ml, 100 ml
- Oxaliplatin
  - Inj 50 mg
  - Inj 100 mg

5.3 The Subcommittee recommended that carboplatin and cisplatin be restricted in a national PML for use as cancer treatments only.

5.4 The Subcommittee recommended that the listing of oxaliplatin in a national PML be subject to restrictions on its use that are in line with the Special Authority restriction for it in the Pharmaceutical Schedule.

6 Chemotherapeutic Agents (Protein-tyrosine Kinase Inhibitors)

6.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Protein-tyrosine Kinase Inhibitors) heading.

6.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Dasatinib
  - Tab 20 mg
  - Tab 50 mg
  - Tab 70 mg
  - Tab 100 mg
- Erlotinib
  - Tab 100 mg
  - Tab 150 mg
- Imatinib
  - Tab 100 mg
- Sunitinib
  - Cap 12.5 mg
  - Cap 25 mg

- Cap 50 mg

6.3 The Subcommittee recommended that the listing of dasatinib, erlotinib, imatinib and sunitinib in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

6.4 Members noted that there may be some use of imatinib for hypereosinophilic syndrome. The Subcommittee recommended that the Haematology Subcommittee be consulted on this issue.

6.5 The Subcommittee noted that PHARMAC had recently decided to subsidise pazopanib and lapatinib, and recommended that these be included in a national PML in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

7 Chemotherapeutic Agents (Taxanes)

7.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Taxanes) heading.

7.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Docetaxel
  - Inj 20 mg
  - Inj 80 mg
- Paclitaxel
  - Inj 30 mg
  - Inj 100 mg
  - Inj 150 mg
  - Inj 300 mg
  - Inj 600 mg

7.3 The Subcommittee recommended that docetaxel and paclitaxel be restricted in a national PML to use as cancer treatments only.

8 Chemotherapeutic Agents (Treatment of Cytotoxic-Induced Side Effects)

8.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Treatment of Cytotoxic-Induced Side Effects) heading.

8.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Calcium folinate
  - Tab 15 mg
  - Inj 3 mg per ml, 1 ml
  - Inj 50 mg

- Inj 100 mg
- Inj 300 mg
- Inj 1 g

- Mesna
  - Tab 400 mg
  - Tab 600 mg
  - Inj 400 mg
  - Inj 1000 mg

8.3 The Subcommittee noted that there has been some use of a 1 mg per ml, 50 ml formulation of calcium folinate in DHB hospitals, but considered that this did not need to be included in a national PML.

9 Chemotherapeutic Agents (Vinca Alkaloids)

9.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Chemotherapeutic Agents (Vinca Alkaloids) heading.

9.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Vinblastine sulphate
  - Inj 10 mg
- Vincristine sulphate
  - Inj 1 mg per ml, 1 ml
  - Inj 1 mg per ml, 2 ml
- Vinorelbine
  - Inj 10 mg per ml, 1 ml
  - Inj 10 mg per ml, 5 ml

9.3 The Subcommittee recommended that vinblastine be restricted in a national PML to use as a cancer treatment only.

9.4 The Subcommittee recommended that the listing of vinorelbine in a national PML be subject to restrictions on its use that are in line with the Special Authority restriction for it in the Pharmaceutical Schedule.

9.5 Members noted that vincristine is also used in obstetrics and gynaecology, so it would not be appropriate to restrict this agent to use in cancer.

9.6 The Subcommittee noted that vindesine is not in use in DHB hospitals, and recommended that this not be included in a national PML.

10 Endocrine Therapy

10.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Endocrine Therapy heading.

10.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and

recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Anastrozole
  - Tab 1 mg
- Bicalutamide
  - Tab 50 mg
- Exemestane
  - Tab 25 mg
- Flutamide
  - Tab 250 mg
- Letrozole
  - Tab 2.5 mg
- Megestrol acetate
  - Tab 160 mg
- Octreotide (somatastatin anlogue)
  - Inj 50 µg per ml, 1 ml
  - Inj 100 µg per ml, 1 ml
  - Inj 500 µg per ml, 1 ml
  - LAR 10 mg prefilled syringe
  - LAR 20 mg prefilled syringe
  - LAR 30 mg prefilled syringe
- Tamoxifen citrate
  - Tab 10 mg
  - Tab 20 mg

10.3 The Subcommittee recommended that the listing of bicalutamide in a national PML be subject to restrictions on its use that are in line with the Special Authority restriction for it in the Pharmaceutical Schedule.

10.4 The Subcommittee recommended that the listing of the LAR formulations of octreotide in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule, but that the short-acting injections not be restricted in a national PML.

11 Immunosuppressants

11.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Immunosuppressants heading.

11.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Azathioprine
  - Inj 50 mg
  - Tab 50 mg
- Mycophenolate mofetil
  - Cap 250 mg
  - Tab 500 mg
  - Powder for oral liq 1 g per 5 ml

- Inf 500 mg
- Antithymocyte globulin (equine)
  - Inj 50 mg per ml, 5 ml
- Bacillus calmette-guerin (BCG) vaccine
  - Inj 2-8 x 10^8 CFU
- Trastuzumab
  - Inj 150 mg vial
  - Inj 440 mg vial
- Ciclosporin
  - Cap 25 mg
  - Cap 50 mg
  - Cap 100 mg
  - Oral liq 100 mg per ml
  - Inf 50 mg per ml, 5 ml
- Sirolimus
  - Oral liq 1 mg per ml
  - Tab 1 mg
  - Tab 2 mg
- Tacrolimus
  - Cap 0.5 mg
  - Cap 1 mg
  - Cap 5 mg
  - Inf 5 mg per ml, 1 ml

11.3 Members noted that while a proprietary oral liquid formulation of azathioprine is available overseas, DHB hospitals currently compound an oral liquid from the tablets. Members considered that a funded oral liquid formulation would be useful.

11.4 The Subcommittee recommended that the listing of oral formulations of mycophenolate in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule. The Subcommittee considered that prescribing restrictions would not be necessary for mycophenolate infusion.

11.5 The Subcommittee noted that antithymocyte globulin (rabbit) injection (2.5 mg per ml, 10 ml vial) was not widely used in DHB hospitals, but considered that it was important treatment option in haematology and recommended that it be included in a national PML.

11.6 The Subcommittee noted that basiliximab (20 mg injection) is not widely used in DHB hospitals, but is a standard treatment in renal transplants. The Subcommittee recommended that this be included in a national PML and that its use be limited to renal transplants.

11.7 The Subcommittee noted that infliximab has previously been recommended for inclusion in a national PML for a number of indications. Members noted that it is also used for a range of off-label uses, and considered that two of these have become established uses for this agent – graft vs. host disease (GvHD) and uveitis. The Subcommittee recommended both indications be included in a national PML and requested the view of the Transplant Immunosuppressant Subcommittee and the Ophthalmology Subcommittee to draft appropriate access criteria. Members also noted that infliximab was also sometimes used in patients with neurosarcoidosis

which is rare and considered that funding for this should be managed through an exceptions process.

11.8 The Subcommittee recommended that BGC vaccine (inj 2-8 x 10^8 CFU) be restricted in a national PML to use as a cancer treatment only.

11.9 The Subcommittee noted that muromonab-CD3 had been discontinued and was no longer in use.

11.10 The Subcommittee noted that picibanil was in use in three tertiary centres as a sclerosing agent. The Subcommittee recommended that this be included in a national PML.

11.11 The Subcommittee noted that rituximab has previously been recommended for inclusion in a national PML for rheumatoid arthritis, and recommended that it also be included for its currently funded PCT indications. The Subcommittee noted that this is used in Auckland for ABO-incompatible renal transplants, and requested advice from the Transplant Immunosuppressant Subcommittee on this matter.

11.12 The Subcommittee recommended that the listing of trastuzumab, sirolimus and tacrolimus in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule

Transplant Immunosuppressant Subcommittee – 7 September 2012

12 Hospital Pharmaceuticals Review

12.1 The Subcommittee reviewed a series of recommendations by the Hospital Pharmaceuticals Subcommittee regarding which pharmaceuticals used in transplant medicine should be included on a national preferred medicines list (PML).

12.2 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that basiliximab inj 20 mg be funded only for renal transplantation. Members recommended that basiliximab inj 20 mg be funded for any solid organ transplant.

12.3 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had requested further advice on the use of infliximab (inj 100 mg) for the treatment of graft versus host disease (GVHD). The Subcommittee noted that infliximab was standard treatment in patients with steroid refractory acute graft versus host disease (GVHD) of the gut. Members recommended that infliximab should be listed in the PML for this use.

12.4 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that sirolimus (tab 1 mg, tab 2 mg and oral liquid 1 mg per ml) be funded as per the community Special Authority criteria. Members noted that sirolimus was standard treatment for pulmonary lymphangioleiomyomatosis (PLAM) to delay or avoid lung transplantation and recommended that such funding be included on both the PML and the community Pharmaceutical Schedule.

12.5 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had requested further advice on the use of rituximab (inj 100 mg and 500mg), in ABO-incompatible renal transplantation. Members considered that this usage was still evolving and was a very small group that could be dealt with through an exceptions process.

12.6 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had not considered the funding of belatacept (250 mg inj). Members noted that this product was used to prevent organ rejection and had similar efficacy to oral calcineurin inhibitors, however, because it only needed to be administered once monthly it may be useful in poorly compliant patients.

12.7 The Subcommittee considered that both rabbit and horse anti-thymocyte globulin (ATG) should be funded as they were standard treatment in the prevention and treatment of acute rejection in organ transplantation, in the prevention of graft versus host disease in haematopoietic stem cell transplantation and as therapy for aplastic anemia. Members recommended that both rabbit and horse ATG be listed in the community and on the PML as they were used in different, non-overlapping, indications.

13 Hospital Pharmaceuticals Review

13.1 The Subcommittee reviewed a series of recommendations by the Hospital Pharmaceuticals Subcommittee in regards to which pharmaceuticals should be included on a national preferred medicines list (PML), and potential changes to the funding of pharmaceutical cancer treatments (PCTs).

13.2 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that a number of PCTs be restricted in a national PML to use in the treatment of cancer only. Members noted that vinblastine and vincristine are also used in the treatment of idiopathic thrombocytopenic purpura.

13.3 The Subcommittee noted that it would be possible instead to restrict prescribing of these agents to being by, or on the recommendation of, oncologists and haematologists. Members noted that, if a prescriber restriction was used, the restrictions for BCG non-vaccine, epirubicin and doxorubicin would also need to include urologists. Members also noted that mitozantrone was sometimes used in multiple sclerosis and therefore restrictions would also need to include neurologists.

13.4 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that carmustine wafer be funded as a PCT for treatment of gliomas, given its previous use under the Cancer EC scheme. The Subcommittee noted that this is not commonly used, but considered that clarifying the funding of this agent would be useful.

13.5 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that topotecan be funded as a PCT for Ewing's sarcoma, given its previous use under the Cancer EC and NPPA schemes. Members noted that the majority of use of topotecan is currently for neuroblastomas in paediatrics, for which it is becoming the standard of care. The Subcommittee recommended that topotecan be listed in the Schedule for both indications with its use for neuroblastomas limited to paediatric oncologists/haematologists.

13.6 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had considered the use of pegylated liposomal doxorubicin for HIV-related Kaposi's sarcoma, but had not recommended that it be funded as a PCT because it is not currently available. Members noted that this agent was now being re-supplied in the United States and that PHARMAC were intending to include it in the 2012/13 invitation to tender. The Subcommittee noted that if this was to be listed, it should also include treatment for ovarian cancer (as recommended previously) and sporadic Kaposi's sarcoma.

13.7 The Subcommittee noted that PHARMAC staff was considering removing the funding exemption that currently applies to paediatric oncology and haematology as part of the introduction of a national PML, and that this may require some changes to the funding of PCTs as a result.

13.8 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that liposomal daunorubicin be funded as a PCT for ALL, as this is used in paediatric haematology. The Subcommittee agreed with this recommendation, but considered that it should be limited to paediatric

oncologists/haematologists, as its place in adult haematology has not been established, and it would be a significant cost, should it started to be used in adult patients.

13.9 The Subcommittee noted that clofarabine is currently used in paediatrics, and recommended that it be funded as a PCT, and restricted to use in refractory relapsed AML or ALL in paediatric patients. Members noted that trials are underway investigating the use of clofarabine in an earlier setting, and also for adult patients. Members consider that if it were funded in adults usage would be significant.

13.10 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had sought advice on whether the current Special Authority criteria for gemcitabine and irinotecan covered the current use of these items in paediatrics. The Subcommittee noted that it has separately recommended that the Special Authority restrictions for these two items be removed.

13.11 The Subcommittee noted that there is interest in using desrazoxane as a cardioprotective agent for patients being treated with anthracyclines, particularly in paediatrics. The Subcommittee **recommended** that PHARMAC staff seek a funding application for this item.

13.12 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that both the equine and leporine (rabbit) versions of antithymocyte globulin (ATG) be available for use in DHB hospitals. The Subcommittee considered that murine (mouse) ATG should also be available, noting that it would be used only after failure of the other two forms.

13.13 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had requested advice on the need for crisantaspase (Erwinia asparaginase) and pegasparaginase (pegylated asparaginase). Members noted that they were considering a funding application for pegasparaginase at this meeting (see item 8). The Subcommittee considered that both agents were alternatives to colaspase (*e.coli* asparaginase), and that while crisantaspase is considered to be both more expensive and less efficacious than pegasparaginase, patients who demonstrate allergy or neutralising antibodies to colaspase would also be allergic to pegasparaginase; a small number of patients would therefore benefit from having crisantaspase available in the event of experiencing a 'significant allergic reaction' to either colaspase or pegasparaginase.

13.14 The Subcommittee recommended that intravenous busulphan should be listed on the PML as this had largely replaced oral busulphan as part of standard bone marrow transplant induction protocols.

13.15 The Subcommittee disagreed with the Haematology Subcommittee's recommendation not to list pegfilgrastim on the PML. The Subcommittee recommended that pegfilgrastim should be listed on the PML only if cost neutral to filgrastim (see item 3.3.9 above for further detail).

14 Review of Oncology Agents and Immunosuppressants Recommendations

14.1 The Subcommittee reviewed its previous recommendations in relation to products in the Oncology Agents and Immunosuppressants group, feedback from other organisations, and recommendations from the Cancer Treatments Subcommittee and Transplant Immunosuppressants Subcommittee.

Chemotherapeutic Agents

14.2 The Subcommittee noted that it had previously recommended that a number of treatments be restricted to use in the treatment of cancer. The Subcommittee considered that there was little risk of most of these being used for other indications, and so recommended that such restrictions not apply except as indicated below.

14.3 The Subcommittee noted that the Special Authority restrictions had recently been removed from anagrelide, capecitabine, gemcitabine, irinotecan, oxaliplatin and vinorelbine, and that these would accordingly not be restricted in a national PML.

14.4 The Subcommittee recommended that arsenic trioxide be subject to recommendation by oncologists and haematologists.

14.5 The Subcommittee recommended that mitozantrone be restricted to use in the treatment of cancer only. The Subcommittee noted the potential for this to be used in multiple sclerosis, and considered that this should be reviewed by PTAC.

14.6 The Subcommittee noted that the Cancer Treatments Subcommittee had considered a number of issues relating to the use of cancer treatments in paediatrics, but that feedback had highlighted additional issues that the Cancer Treatments Subcommittee would need to consider further.

14.7 The Subcommittee noted that it had previously recommended that thalidomide be subject to restrictions that match the PCT criteria, plus a provision for its use in leprosy. The Subcommittee noted that thalidomide is used off-label for a variety of indications, such as gastrointestinal bleeding; the Subcommittee recommended that PHARMAC consider including other indications based on a review of NPPA applications.

14.8 The Subcommittee noted that the Haematology Subcommittee had considered that the use of imatinib in hypereosinophilic syndrome could be managed under NPPA. The Subcommittee considered that it would be useful for PTAC to review the evidence for this use.

Immune Modulators

14.9 The Subcommittee noted feedback requesting that criteria for rituximab be extended to include several renal indications. The Subcommittee considered that it would be appropriate for PTAC to review the evidence for these uses.

Immunosuppressants

14.10 The Subcommittee noted that the Transplant Immunosuppressants Subcommittee had recommended that the restrictions for sirolimus in the community and in DHB hospital be extended to include treatment for pulmonary lymphangioleiomyomatosis (PLAM). Members noted that a number of patients had approvals under NPPA for sirolimus for PLAM, and considered that the evidence for this should be reviewed by PTAC.

14.11 The Subcommittee noted feedback requesting that tacrolimus be made available for nephrotic syndrome. The Subcommittee considered that this would be a community-led funding decision.

Pharmacology and Therapeutics Advisory Committee – 14 & 15 February 2013

15 Hospital Pharmaceuticals Review

15.1 The Committee considered a list of pharmaceuticals under consideration for use in DHB hospitals under the Oncology Agents and Immunosuppressants heading, including advice from the Hospital Pharmaceuticals Subcommittee, the Transplant Immunosuppressants Subcommittee and the Cancer Treatments Subcommittee. Except where indicated, the Committee agreed with the recommendations by the subcommittees.

15.2 The Committee noted that the Hospital Pharmaceuticals Subcommittee had recommended that arsenic trioxide be subject to recommendation by oncologists or haematologists. The Committee considered that it was not necessary for arsenic trioxide to have such a restriction.

15.3 The Committee noted a request from paediatric renal physicians for rituximab to be available for renal transplants. Members noted that paediatric renal transplants are more likely to be from live donors and ABO-incompatible than adult renal transplants. The Committee considered that PHARMAC should discuss this issue further with paediatric renal physicians.

15.4 The Committee noted that as part of assuming responsibility for all hospital pharmaceuticals, PHARMAC was intending to revisit the exemption that currently exists for paediatric oncology/haematology. Members noted that such a change was not proposed for July 2013, and that it would involve PTAC, CaTSoP and paediatric oncologists/haematologists.