

National Essential Medicines List Committee (NEMLC)

TERTIARY AND QUATERNARY LEVEL ESSENTIAL MEDICINES LIST

Reviewed Items

June 2021

	SUMMARY OF CHANGES TO THE NEMLC TERTIARY AND QUATERNARY LEVEL ESSENTIAL MEDICINES LIST (June 2021)							
ATC CODE	MEDICINE	INDICATION	NEMLC OUTCOMES	REVIEW INDICATORS	DATE RATIFIED			
		A ALI	MENTARY TRACT AND METABOLISM					
A02BC	Proton Pump Inhibitors (PPIs), IV	For hospitalised patients requiring PPI therapy and are unable to take these orally or via nasogastric tube	Approved Only for hospitalised patients are unable to take PPIs orally or via nasogastric tube	n/a	24 June 2021			
		D ANTIPRURITICS,	INCLUDING ANTIHISTAMINES, ANAESTI	HETICS, ETC.				
D06BB10	Imiquimod topical (5%)	Anogenital warts	Not Approved	New evidence	24 June 2021			
D10BA01	Isotretinoin	Moderate to severe recalcitrant nodular acne	Approved	• n/a	24 June 2021 (Previously reviewed 09 February 2012)			
	L ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS							
L01XC02	Rituximab	CD20 positive indolent B-cell non- Hodgkin's lymphoma	Not Approved for treatment in indolent B- Cell non-Hodgkin's lymphomas	Further evidence reviewPrice reduction	24 June 2021			

	TERTIARY AND QUATERNARY LEVEL ESSENTIAL MEDICINES RECOMMENDATIONS								
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED				
		A ALIMENTARY TRACT AND META	BOLISM						
A04AA01/ A04AA02	04AA01/ Serotonin-3 Highly emetogenic chemotherapy Approved n/a								
A05AA02	Ursodeoxycholic acid	Primary biliary cirrhosis.	Not Approved	The emergence of new evidence of efficacy with regard to mortality or transplantation	13 March 2008				
A07EC02	Mesalazine	Ulcerative colitis – maintenance of remission.	Approved – Special Access Special access may be granted based on recommendation by PTC for patients with sulfonamide hypersensitivity.	Price (to be evaluated as a therapeutic class with sulfasalazine)	October 2015				

	TER	TIARY AND QUATERNARY	LEVEL ESSENTIAL MEDICINES R	ECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
A10BG03	Pioglitazone	Type 2 diabetes mellitus.	Not Approved	Robust safety data	February 2012
A10AE05/ A10AE04	Long acting insulin analogues Insulin detemir, Insulin glargine	Diabetes mellitus.	Not Approved	 Price decrease (similar to Neutral Protamine Hagedorn (NPH) insulin) Evidence for superior safety of analogues over NPH 	30 June 2016
A11/A12	Micronutrients	Addition to Parenteral Nutrition for long-term use.	Approved Approved for use where long-term parenteral nutrition is required/anticipated. Short- term TPN should be done with off the shelf parenteral nutrition bags – no added micronutrients.	New evidence	19 March 2020
A16AA03	Glutamine	Glutamine as a component of enteral and parenteral nutrition in critically ill patients.	Not Approved	Robust safety data Evidence of mortality efficacy	30 June 2016
A02BC	Proton Pump Inhibitors (PPIs), IV	For hospitalised patients requiring PPI therapy and are unable to take these orally or via nasogastric tube	Approved Only for hospitalised patients are unable to take PPIs orally or via nasogastric tube	n/a	24 June 2021
		B BLOOD AND BLOOD FORMING	ORGANS		
B01AC04	Clopidogrel	Percutaneous coronary intervention (stenting).	 Approved Clopidogrel plus aspirin recommended for a minimum of: 30 days in situations where a bare metal stent is inserted. 90 days in situations where a sirolimus drug-eluting stent is inserted. 180 days when a paclitaxel drug-eluting stent is inserted. Thereafter allow aspirin indefinitely. The evidence currently available to the Committee does not provide support for use beyond 6 months although there are recommendations endorsing longer term use in high risk patients. 	n/a	20 September 2007

	TER	TIARY AND QUATERNARY	LEVEL ESSENTIAL MEDICINES R	ECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
B01AC04	Clopidogrel	Ischaemic heart disease (non-myocardial infarction).	Approved for long-term use only in patients intolerant to aspirin, i.e. allergy or bleeding episodes.		20 September 2007
B01AC04	Clopidogrel	Stroke.	Approved, only for long-term therapy where patient has confirmed aspirin intolerance.	Decrease in clopidogrel price New safety or efficacy data for either aspirin (at doses recommended by the DoH) or clopidogrel	24 July 2014
B01AC04	Clopidogrel	Transient ischaemic attack with/without atrial fibrillation.	Not Approved	Decrease in clopidogrel price New safety or efficacy data for either aspirin or clopidogrel	24 July 2014
B02BD03	Recombinant Factor VIIa (rFVIIa)	Intractable bleeding.	Not Approved	Robust efficacy data	29 June 2017
B02BD03	Haemophilia bypassing agents (rFVIIa/aPCC)	Haemophilia with inhibitors (on demand, when presenting with a significant bleed).	Approved, Special Access One bypassing agent to be available on the EML (most affordable). An alternative bypassing agent can be made available as emergency stock on a special access basis as approved by the PTC for patients not responding to EML item.		14 December 2017
		C CARDIAC THERAPY			
C02DC01	Minoxidil	Severe hypertension not responding to other drugs.	Approved	n/a	20 September 2007
C09CA	Angiotensin receptor blockers (ARBs)	Add on therapy in cardiac failure on patients already on standard treatment including ACE-inhibitors, ß-Blockers and spironolactone.	Not Approved	 New efficacy data from large RCT indicating larger benefit of adding ARBs to standard therapy Decrease in price of ARBs so as to be similarly priced to ACE-inhibitors 	20 September 2007
C09CA	Angiotensin receptor blockers (ARBs)	As add on therapy in proteinuric nephropathies in patients already using an ACE-inhibitor.	Not Approved Insufficient evidence to support its use.	New evidence indicating benefit in the form of a RCT of sufficient size with maximal doses of ACE-inhibitor used New safety concerns.	20 September 2007

ATC CODE MEDICINE INDICATION NEMLC RECOMMENDATION REVIEW INDICATORS DATE RATII							
ATC CODE	WEDICINE	INDICATION	NEWLC RECOMMENDATION	Decrease in price so as to be similarly priced to ACE-inhibitors	DATE KATIFIED		
		D ANTIPRURITICS, IN	NCLUDING ANTIHISTAMINES, ANAESTHETICS	S, ETC.			
D07AD	Very potent topical corticosteroid – Group IV e.g. Clobetasol 0.05% Examples: Cream/ointment: • Clobetasol propionate 0.05%.		Approved Lowest price high potency corticosteroid to be used.	n/a	20 September 2007		
D10BA01	Isotretinoin	Moderate to severe recalcitrant nodular acne	Approved	n/a	24 June 2021 (Previously reviewed 09 February 2012)		
D06BB10	Imiquimod 5% topical	Anogenital warts	Not Approved	New evidence	24 June 2021		
		SENITO URINARY SYSTEM AND SE					
G03AC03	Levonorgestrel Intrauterine system	Abnormal Uterine Bleeding (3 rd line therapy)	 Approved Third line therapy where there has been treatment failure. Prescribed and inserted by a gynaecologist. 	n/a	27 September 2018		
G03CA	Estrogen	Gender Dysphoria – Feminising regimen	Approved	New evidence	5 December 2019		
G03BA03	Testosterone	Gender Dysphoria – Masculinising regimen	Approved	New evidence	5 December 2019		
G03DA02/ G03HA01	Medroxyprogestero ne acetate OR Cyproterone acetate	Patients with hypersexual behaviour including paraphilia's	Approved Most affordable agent should be procured. If price parity: cyproterone is preferred due to decreased frequency of dosing.	Evidence of harm Price reduction	11 April 2019		
G03HB01	Cyproterone, Ethinyl estradiol	Hirsutism.	Approved	n/a	20 September 2007		

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ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
G04BD10	Urinary antispasmodics Darifenacin	Over active bladder (OAB) with symptoms of urinary urgency, frequency and/or urge incontinence.	Not Approved	Price New safety/efficacy data	13 March 2008
G04CB01	Finasteride	Benign prostatic hyperplasia.	Not Approved	• Price	13 March 2008
	H SYSTEMIC HOR	MONAL PREPARATIONS, EXCL. SE	X HORMONES AND INSULINS		
H01AA01	Adrenocorticotrophic hormone (ACTH)	Infantile spasms.	Not Approved	Well controlled studies of proven efficacy of ACTH	September 2010
H01AC01	Somatropin (Growth Hormone)	Turner's syndrome.	Not Approved	Improved cost-effectiveness.	20 September 2007
H01AC01	Somatropin (Growth Hormone)	Prader Willi syndrome.	Not Approved	• Price	20 September 2007
H01AC01	Somatropin (Growth Hormone)	Intrauterine growth failure.	Not Approved	• Price	20 September 2007
H01AC01	Somatropin (Growth Hormone)	Idiopathic short stature.	Not Approved	Improved cost-effectiveness	20 September 2007
H01AC01	Somatropin (Growth Hormone)	Chronic renal insufficiency.	Not Approved	Evidence of benefit	20 September 2007
H01AC01	Somatropin (Growth Hormone)	Growth hormone deficiency.	Approved Approved for confirmed growth hormone deficiency for use by endocrinologists only. Rationale: The condition is a well-defined deficiency state that can be managed and monitored. Number of patients requiring treatment is small.	New evidence on quality of life assessment in local and specific populations	24 July 2008
H01BA05	Ornipressin	Bleeding associated with bronchoscopy and renal biopsy.	Not Approved	New high quality evidence of superior efficacy to adrenalin	29 October 2012
H01CB02	Octreotide (Short-acting)	Persistent neonatal hyperinsulinism and hypoglycaemia.	Approved The condition is rare; usage is for short term; alternative agents are limited and the consequences of not having treatment available are serious.		

	IE	RIIARY AND QUATERNARY	LEVEL ESSENTIAL MEDICINES R	ECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
H01CB	Somatostatin analogs Octreotide, Lanreotide	Neuro-endocrine tumours.	Not Approved	Long term survival and quality of life data	26 March 2015
		J ANTI-INFECTIVES FOR SYSTE	MIC USE		
J01XC01	Fusidic acid	Treatment of staphylococcal infections, mainly involving bone and joints: • Methicillin-sensitive organisms, as alternative to cloxacillin or flucloxacillin. • Methicillin-sensitive organisms, in combination with cloxacillin or flucloxacillin. • Methicillin-resistant organisms, as an alternative to e.g. glycopeptides or oxazolidinones (linezolid), especially in cases where prolonged treatment is required.	Not Approved	New evidence of clinical comparative efficacy against alternatives, especially regarding long- term treatment of MRSA where the oral preparation may be of benefit in comparison to parenteral glycopeptides and infections with glycopeptide resistant organisms where the potential toxicity of oxazolidinones (linezolid) when used for prolonged periods of time, may be problematic	13 March 2008
J01XX08	Linezolid	Resistant gram positive infections where vancomycin is contraindicated.	Approved – Special Access It may be available on special access basis as approved by PTC for: Only with a microbiology report confirming vancomycin resistance in a relative organism or confirmation of severe adverse effect to vancomycin, (i.e. vancomycin induced neutropenia or anaphylaxis, but not the "red man syndrome"). Confirmed contra-indication to the use of vancomycin.	Clinically significant increase in vancomycin resistance in the public sector Significant decrease in cost of linezolid	27 November 2008
J02AB02	Ketoconazole	Cushing's syndrome.	Approved	Availability of alternate medication for this indication with superior efficacy or safety profile. New safety concerns	10 July 2008

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ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
J02AC02	Itraconazole	Histoplasmosis.	Not Approved	New evidence of clinical comparative efficacy against alternatives, especially weekly Amphotericin B Significant increase in incidence of the condition. Significant change in pricing	13 March 2008
J02AX04/J 02AX05/ J02AX06	Echinocandins (caspofungin/ micafungin/ anidulafungin)	Invasive candidiasis (resistant to fluconazole/amphotericin B and/or where renal dysfunction is present and amphotericin B cannot be used).	Approved – Special Access Echinocandins approved as a class, with the most affordable agent to be procured. The use of echinocandins should be managed through motivation/ appropriate restrictions at facilities, as part of Antimicrobial Stewardship activities. (See addendum – clinical criteria for use)	Availability of amphotericin B Changing resistance patterns New evidence	12 April 2018
J02AC03	Voriconazole (VCZ)	Treatment of invasive Aspergillosis.	Not Approved	High quality randomised controlled trial with amphotericin B as the comparator	13 March 2008
J05AB04	Ribavirin	Viral haemorrhagic fever (VHF).	Approved To be supplied on motivation from a central supply point.	n/a	
J06BA02	Intravenous Immunoglobulin (IVIG)	Acute Immune thrombocytopenic Purpura (ITP)	 Approved Life-threatening bleed with platelets <50 x 109/l. Urgent surgery (any surgery urgently required within 24 hours) where rapid rise in platelets is required. Pregnant patient prior to delivery as above. Rapid rise in platelets required when a patient has platelet count of < 20 x 109/L, with additional risk factors for bleeding (such as severe hypertension, ongoing sepsis). 	Evidence of harm	5 July 2018

	TER	TIARY AND QUATERNARY	LEVEL ESSENTIAL MEDICINES F	RECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
J06BA02	Intravenous Immunoglobulin (IVIG)	Primary antibody immune deficiency with recurrent infections	Approved	New data on dosingAvailability of more affordable subcutaneous formulations	11 April 2019
J06BA02	Intravenous Immunoglobulin (IVIG)	Guillain-Barré syndrome (GBS) presenting within the first 2 weeks of onset of moderate to severe weakness.	Approved The recommended regimen is 0.4 g/kg daily for 5 days.	New evidence	5 December 2019
J06BB16	Palivizumab	Respiratory syncytial virus (RSV) infection in high-risk premature infants.	Not Approved	Price reduction	25 April 2013
	L AN	TINEOPLASTIC AND IMMUNOMODU	LATING AGENTS		
L01	Platinum coordination compounds, Taxanes, Doxorubicin, Cyclophosphamide	Uterine Cancer/ Endometrial Cancer (Advanced stage and recurrent).	Not Approved	Better quality data	22 January 2015
L01AA01	Cyclophosphamide	Adjuvant breast cancer.	Approved (Cyclophosphamide plus Doxorubicin (AC)).	n/a	27 November 2008
L01AA01	Cyclophosphamide	Adjuvant breast cancer.	Approved (Cyclophosphamide plus methotrexate plus fluoro-uracil (CMF)).	n/a	27 November 2008
L01AA01	Cyclophosphamide	Adjuvant breast cancer.	Approved (Fluoro-uracil plus Doxorubicin plus cyclophosphamide (FAC)).	n/a	27 November 2008
L01AA02	Chlorambucil	Chronic lymphocytic leukemia, low grade non-Hodgkin's lymphoma	Approved	n/a	11July 2019
L01AA03	Melphalan	Multiple myeloma (oral-remission induction combined with steroids in older) (IV –pre-autologous stem cell transplant in multiple myeloma and lymphomas).	Approved	n/a	11July 2019
L01AA06	Ifosfomide	Germ cell tumours, soft tissue sarcomas, salvage therapy in lymphomas pre-autologous stem cell transplant.	Approved	n/a	11July 2019

	TEF	RTIARY AND QUATERNARY	LEVEL ESSENTIAL MEDICINES F	RECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
L01AB01	Busulfan	Pre allogeneic and autologous stem cell transplant conditioning	Approved	n/a	11July 2019
L01AX03	Temozolomide	Glioblastoma multiforme.	Not Approved	Prospective RCTs demonstrating a significant increase in effect size Significant price reduction	25 July 2013
L03AX03	Bacille Calmette- Guerin (BCG)	Bladder Cancer (non-muscle invasive)	Approved	None	25 February 2016
L01AX04	Dacarbazine	Hodgkin's lymphoma.	Approved	n/a	11July 2019
L01BA01	Methotrexate	Adjuvant breast cancer.	Approved (Cyclophosphamide plus methotrexate plus fluoro-uracil (CMF)).	n/a	27 November 2008
L01BA04	Pemetrexed	Lung mesothelioma.	Not Approved	Price changes or access programmes	27 November 2008
L01BA04	Pemetrexed	Non-small cell lung cancer.	Not Approved	Evidence of superior efficacy vs.cisplatin/gemcitabine. Price reduction	29 September 2011
L01BB02	Mercaptopurine	Acute leukaemia.	Approved	n/a	11July 2019
L01BB03	Thioguanine	Acute leukemia.	Approved	n/a	11July 2019
L01BB05	Fludarabine	Chronic lymphocytic leukaemia, non-Hodgkin's lymphomas, pre- conditioning regimen for allogeneic stem cell transplant, AML salvage therapy.	Approved	n/a	11July 2019
L01BC01	Cytarabine	Acute myeloid leukaemia (AML) and acute lymphoid leukaemia (ALL).	Approved	n/a	11July 2019
L01BC02	Topical 5 Fluorouracil	Actinic Keratosis.	Approved Approved as Historically Accepted Use.	n/a	19 March 2020
L01BC06	Capecitabine	Relapsed metastatic breast cancer failing an anthracycline and a taxane.	Not Approved	Price changes	15 September 2016

	ILN	TIART AND QUATERNART	LEVEL ESSENTIAL MEDICINES R	ECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
L01BC06	Capecitabine	Metastatic colorectal – first-line.	Approved (as part of the XELOX regimen).	 Availability of data for alternative oral fluoropyrimidines Price increases not commensurate with approved SEP increases 	27 November 2008
L01BC06	Capecitabine	First-line therapy for advanced stomach/gastro-oesophageal junction cancer.	Approved	None	27 July 2014
L01BC06/ L01BC05	Capecitabine plus Gemcitabine	Adjuvant chemotherapy of fully resected potentially curable pancreatic adenocarcinoma).	Approved Only for fully resected patients.	New adjuvant chemotherapy data in patients with R0 or R1 resected adenocarcinoma of the pancreas	6 December 2018
L01BC52	Fluoro-uracil	Adjuvant breast cancer.	Approved (Cyclophosphamide plus methotrexate plus fluoro-uracil (CMF)).	n/a	27 November 2008
L01BC52	Fluoro-uracil	Adjuvant colorectal cancer.	Approved (Fluoro-uracil plus Doxorubicin plus cyclophosphamide (FAC)).	n/a	27 November 2008
L01CA01	Vinblastine	Relapsed metastatic breast cancer (mBC) failing an anthracycline and a taxane.	Approved	n/a	15 September 2016
L01CA02	Vincristine	General haematology and oncology	Approved	n/a	27 September 2018
L01CA04	Vinorelbine	Adjuvant non-small cell lung cancer (NSCLC) – completely resected.	Approved To be used with cisplatin for adjuvant therapy for stage IIIA NSCLC but not stage IB or stage II.	New evidence of efficacy of adjuvant therapy in NSCLC	03 December 2009
L01CA04	Vinorelbine (IV)	Relapsed metastatic breast cancer (mBC) failing an anthracycline and a taxane.	Approved	n/a	15 September 2016
L01CA04	Vinorelbine (oral)	Relapsed metastatic breast cancer (mBC) failing an anthracycline and a taxane.	Not Approved	Price similar to oral Evidence of clinical superiority	15 September 2016
L01CD	Taxanes	Adjuvant breast cancer.	Approved Approved for patients with high grade, node	n/a	00.4
	Docetaxel, Paclitaxel		positive ER negative disease.		23 August 2012

			LEVEL ESSENTIAL MEDICINES R		
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
L01CD01	Paclitaxel	Neoadjuvant/recurrent/ metastatic head and neck cancer.	Not Approved	n/a	27 July 2014
L01CD01	Paclitaxel	First-line chemotherapy in advanced non-small cell lung cancer (NSCLC).	Approved	None	22 January 2015
L01CD01	Paclitaxel	Metastatic cervical carcinoma.	Approved	n/a	11July 2019
L01CD	Taxanes	Metastatic breast cancer – first- and second-line.	Approved	Change in the price of taxanes, specifically docetaxel.	16 September 2010
L01CD02	Docetaxel	Squamous cell carcinoma of head and neck.	Approved Approved for patients with good performance status and adequate follow-up used in combination with cisplatin plus 5-fluoro-uracil.	None	25 July 2013
L01CD02	Docetaxel	Second-line therapy for advanced non-small cell lung cancer (NSCLC) in selected patients with good performance status (ECOG 0;1).	Approved	None	22 January 2015
L01CD02	Docetaxel	Castrate resistant prostate cancer.	Approved Docetaxel 75mg/m2 intravenously 3 times weekly plus prednisone 10mg orally, for 6 cycles.	Reduction in cost and availability of 3rd generation ARBs e.g. enzalutamide and CYP17 inhibitors e.g. abiraterone	11July 2019
L01CD02	Docetaxel	Patients with hormone sensitive prostate cancer (HSPC).	Approved For patients with high volume disease: defined as the presence of visceral metastases or ≥4 bone lesions with ≥1 beyond the vertebral bodies and pelvis	New evidence	30 January 2020
L01DB01	Doxorubicin	Adjuvant breast cancer.	Approved (Doxorubicin plus cyclophosphamide (AC)).	None	27 November 2008
L01DB01	Doxorubicin	Adjuvant breast cancer.	Approved (Fluoro-uracil plus Doxorubicin plus cyclophosphamide (FAC)).	None	27 November 2008

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ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED			
L01DB02	Daunorubicin	acute myeloid leukaemia (AML) and acute lymphoid leukaemia (ALL)	Approved	n/a	11July 2019			
L01DB06	Idarubicin	Acute Myeloid Leukemia.	Approved	n/a	10 December 2015			
L01DB07	Mitoxantrone	General oncology.	Approved Indications for consideration: Advanced stage carcinomas, paediatric relapsed acute lymphoblastic leukaemia (ALL), paediatric acute myeloid leukaemia (AML).	None	30 June 2016			
L01DB03	Epirubicin	Advanced stage or metastatic oesophageal junction and gastric carcinoma.	Approved	None	10 December 2015			
L01DC01	Bleomycin	Hodgkin's, Kaposi, Germ cell tumours, Pleuradhesis.	Approved	None	27 September 2018			
L01DC03	Mitomycin C	Bladder Cancer.	Not Approved	None	25 February 2016			
L01DC03	Mitomycin C	Relapsed metastatic breast cancer (mBC) failing an anthracycline and a taxane.	Not Approved	None	15 September 2016			
L01XA01	Cisplatin	Adjuvant small cell lung cancer.	Approved	None	27 November 2008			
L01XA01	Cisplatin	Adjuvant lung cancer.	Approved	None	27 November 2008			
L01XA01	Cisplatin	Relapsed metastatic breast cancer (mBC) failing an anthracycline and a taxane.	Approved To be used with gemcitabine	None	15 September 2016			
L01XA01	Cisplatin	Radio-sensitizer in cervical cancer	Approved	None	6 December 2018			
L01XA01	Cisplatin	Advanced/Metastatic: Various Cancers	Approved	n/a	11July 2019			
L01XA01	Cisplatin	Adjuvant/Neoadjuvant: various cancers.	Approved	n/a	11July 2019			
L01XA02	Carboplatin	Adjuvant lung cancer.	Approved	None	27 November 2008			
L01XA02	Etoposide	Adjuvant small cell lung cancer.	Approved	None	27 November 2008			
L01XA03	Oxaliplatin	Adjuvant colorectal.	Not Approved	Mature published data	27 November 2008			

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ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED			
L01XA03	Oxaliplatin	First or second-line metastatic colorectal cancer.	Approved	None	10 December 2015			
L01XC07	Bevacizumab	Sub-retinal neovascular membranes and non-resolving macular odema.	Approved (off label indication).	None	10 December 2015			
L01XE01	Imatinib	Chronic phase of chronic myeloid leukemia.	Approved	None	27 March 2014			
L01XE01	Imatinib	Gastrointestinal Stromal Tumours (GIST) - adjuvant therapy.	Approved	None	25 June 2015			
L01XE01	Imatinib	Gastrointestinal Stromal Tumours (GIST) - metastatic therapy.	Approved	None	25 June 2015			
L01XE08	Nilotinib	Chronic Myeloid Leukemia in patients resistant or intolerant to imatinib.	Approved	Longer term follow-up of nilotinib versus imatinib showing clinical benefits in the first line Reduction in cost oravailability of nilotinib generics	22 January 2015			
L01XC02	Rituximab	CD20 positive diffuse large B-cell non-Hodgkin's lymphoma: first-line.	Approved for treatment in diffuse large B-cell non-Hodgkin's lymphoma (DLBCL) patients except those with International Prognostic Index (IPI) of 0.	New anti-CD20 monoclonal antibodies, more data and international consensus statements in FL patients, rituximab price changes	23 August 2012			
L01XC02	Rituximab	Rheumatoid Arthritis patients refractory to synthetic DMARDs.	Approved For patients with refractory RA, who have failed ≥ 3 DMARDs taken for ≥ 6 months. (in accordance with algorithm)	Evidence of harm	5 July 2018			
L01XC02	Rituximab	Refractory lupus nephritis.	Approved – Special Access Special Access may be granted on recommendation by the PTC. Used as per NEMLC-approved treatment algorithm. Use must be monitored and managed by PTCs through a registry. Clinical outcomes to be shared with the National registry database for biological therapy.	Changes in evidence of efficacy/safety Change in cost	11 April 2019			

			LEVEL ESSENTIAL MEDICINES R		
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
L01XC02	Rituximab	CD20 positive indolent B-cell non- Hodgkin's lymphoma	Not Approved for treatment in indolent B-Cell non-Hodgkin's lymphomas	Further evidence review Price reduction	24 June 2021
L01XC03	Trastuzumab	Adjuvant treatment for early stage HER-2 positive breast cancer, 6 month regimen.	Approved Regimen: administered 3 weekly for a period of 6 months.	New evidence	5 December 2019 (previously reviewed: 29 June 2017)
L01XG01	Bortezomib	Transplant eligible multiple myeloma	Approved – Special Access Data to ensure rational use to be submitted for all patients by PTCs to the National Department of Health.	New evidence Price	25 March 2021
L01XX02	Asparaginase	Acute lymphoblastic leukemia (ALL)	Approved	n/a	11July 2019
L01XX14	All-trans retinoic acid (tretinoin)	Acute promyelocytic leukaemia	Approved	None	27 September 2018
_01XX19	Irinotecan	Adjuvant colorectal.	Not Approved	Evidence to show benefit	27 November 2008
L01XX19	Irinotecan	First- or second-line metastatic colorectal cancer.	Approved	None	10 December 2015
L02AE03	Gonadotrophin- releasing hormone (GnRH) analogue Goserelin, Buserelin	Endometriosis.	Approved for use in the following situations: • For endometriosis-associated infertility prior to in vitro fertilisation (IVF). For medical management in situations in which a trial of adequate analgesia or the use of combined oral contraceptives is unsuccessful.	New evidence based on Goserelin vs. Placebo Large comparative trials with COCs for both "trial of hormone therapy" and for relief of pain Comparisons with new agents such as aromatase inhibitor	13 March 2008
_02AE03	Gonadotrophin- releasing hormone (GnRH) analogue	Precocious puberty.	Approved Choice of GnRH analogue will depend on best tender price.	Change in price or registration of new agents which are cheaper or more efficacious, or both. New safety concerns	13 March 2008
_02AE03	Gonadotrophin- releasing hormone (GnRH) analogue	As bridging therapy until orchiectomy.	Approved Only Approved as bridging therapy - not long-term management.	• Price	25 February 2016

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ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED		
L02AE03	Goserelin	Hormone receptor positive breast cancer in premenopausal women.	Not Approved	None	10 December 2015		
L02BA01	Tamoxifen	Adjuvant breast cancer.	Approved	None	27 November 2008		
L02BA01	Tamoxifen	Metastatic breast cancer.	Approved	None	27 November 2008		
L02BA03	Fulvestrant	Advanced Breast Cancer (ABC) Hormone Receptor Positive (HR+) [C50] – third or fourth line therapy	Not Approved This status will be reconsidered if offered/contract price is comparable or lower than that of standard chemotherapy.	Price	25 March 2021		
L02BB01/ L02BB03	Anti-androgens Flutamide,	Advanced prostate cancer.	Not Approved Orchiectomy preferred.	None	29 October 2012		
L01BC05	Bicalutamide Gemcitabine	Pancreatic cancer.	Not Approved	Reduction in cost of gemcitabine	29 October 2012		
L01BC05	Gemcitabine	First-line chemotherapy in advanced non-small cell lung cancer (NSCLC) in patients intolerant to paclitaxel.	Approved Approved in patients intolerant to paclitaxel.	n/a	22 January 2015		
L01BC05	Gemcitabine	Relapsed metastatic breast cancer (mBC) failing an anthracycline and a taxane.	Approved	n/a	15 September 2016		
L02BG	Aromatase inhibitors Anastrozole, Letrozole, Exemestane	Adjuvant breast cancer.	Approved for use in women with confirmed intolerance to tamoxifen, i.e. thrombo-embolic disease or endometrial hyperplasia (proven on ultrasound). Choice of aromatase inhibitor will depend on best tender price.	Publication of the ongoing Secondary Adjuvant Long term Study with Arimidex (SALSA) study and ATAC Long term data BIG 1-98 TEAM data late in 2008 Price parity with tamoxifen	27 November 2008		
L02BG	Aromatase inhibitors	Metastatic breast cancer.	Approved for use as second-line therapy after tamoxifen in advanced breast cancer in postmenopausal women who do not have visceral metastases. Choice of aromatase inhibitor will depend on best tender price.	Further developments regarding tamoxifen pharmacogenetics	September 2010		
L03AA02	Filgrastim	Febrile neutropaenia.	Approved under the following conditions: Patients must have had 3 days of appropriate antimicrobial therapy without resolution of infection.	None	27 November 2008		

	TERTIARY AND QUATERNARY LEVEL ESSENTIAL MEDICINES RECOMMENDATIONS							
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED			
			Filgrastim can be used up to a maximum of 5 days with a daily review of white cell count (WCC). Failure to respond must prompt further investigation of neutropenia.					
L03AA02	Filgrastim	ARV-induced neutropenia.	Not Approved This does not preclude the use of filgrastim in the management of febrile neutropenia (see above) in HIV infected patients.	RCTs, with improved clinically relevant outcomes, especially mortality	27 November 2008			
L03AA02	Filgrastim	Prophylactic use in children with high-risk acute lymphoblastic leukaemia (HR-ALL).	Not Approved	 The emergence of evidence that routine use of GCSF improves outcomes in HR-ALL. A significant reduction in the price of GCS 	3 December 2009			
L03AA02	Filgrastim	Peripheral blood stem cell harvesting in autologous stem cell harvesting in haematological malignancies.	Approved	n/a	24 July 2014			
L03AA02	Filgrastim	Chemotherapy-induced febrile neutropenia.	Approved for secondary prophylaxis in curable cancers requiring full dosing on-schedule, i.e. Hodgkins and germ cell tumours.	n/a	9 February 2012			
L03AA02	Filgrastim	Chemotherapy-induced febrile neutropenia.	Not Approved for primary prophylaxis as no overall survival benefit and limited mortality benefit has been shown.	n/a	9 February 2012			
L04AA04	ATG	Induction therapy in <u>high risk</u> renal transplantation recipients.	Approved	None	29 June 2017			
L04AA10	Sirolimus	Renal transplant.	Approved for use only patients with biopsyconfirmed calcineurin inhibitor toxicity because of deteriorating kidney function (i.e. in patients at ongoing risk of acute rejection with no overt proteinuria and preserved GFR > 40mL/min) where mycophenolate mofetil is contra-indicated.	Reduction in cost or new efficacy data	16 September 2010			
L04AA06	Mycophenolate mofetil (MMF)	Lupus Nephritis.	Approved for both the induction and maintenance phases of treatment of lupus nephritis.	None	18 September 2014			

TERTIARY AND QUATERNARY LEVEL ESSENTIAL MEDICINES RECOMMENDATIONS							
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED		
L04AA06	Mycophenolate mofetil (MMF)	Prevention of acute rejection post- renal transplantation.	Approved for prevention of acute rejection post- renal transplantation.	Reduction in cost or new efficacy data	16 September 2010		
L04AA13	Leflunomide	As add-on therapy in Rheumatoid Arthritis.	Approved – Special Access Special access be permitted on recommendation by PTC for intolerance to standard therapy.	New efficacy data or reduction in cost	31 March 2016		
L04AA13	Leflunomide	Rheumatoid Arthritis where patients are intolerant or have contraindications to methotrexate and sulphasalazine.	Approved Only for use in patients with intolerance to standard DMARD therapy (methotrexate or sulphasalazine)	New evidence Safety concerns Price change	12 April 2018		
L04AA04	Antithymocyte immunoglobulin (ATG)	Aplastic Anaemia.	Approved (in combination with ciclosporin and corticosteroids)	None	10 December 2015		
L04AA31	Teriflunomide	Relapsing remitting multiple sclerosis.	Approved Provided offered price is comparable or lower than beta interferon	New evidence of clear benefit of efficacy of newer classes Price changes	19 March 2020		
L04AB02	Infliximab	Fistulising Crohn's Disease.	Not Approved	A considerable change in the price of the drug	20 September 2007		
L04AB02	Infliximab	Rheumatoid Arthritis.	Not Approved	Demonstration in randomized trials of reduction in clinically significant endpoints, e.g. hospitalizations, joint replacements, etc. Evidence of sustained, clinically relevant improvement upon withdrawal of infliximab A significant reduction in the price of the medicine	13 March 2008		
L03AB07/ L03AB08	Interferon beta	Relapsing remitting multiple sclerosis	Approved	New evidence of clear benefit of efficacy of newer classes Price	30 January 2020		
_04AC02	Basiliximab	Induction therapy in low risk patient's renal transplantation recipients.	Approved	None	29 June 2017		
L04AD01	Ciclosporin	Organ transplantation.	Approved	n/a	20 September 2007		

	TER	TIARY AND QUATERNARY	LEVEL ESSENTIAL MEDICINES	RECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
L04AD02	Tacrolimus	 Primary therapy in high immunological risk renal allograft recipients. Renal allograft recipients on ciclosporin who experience steroid resistant acute allograft rejection. 	Approved	None	29 June 2017
L04AX02	Thalidomide	Multiple myeloma.	Approved	• Price	June 2019 (reference price met)
		M MUSCULOSKELETAL SYS	TEM	•	
M03BX01	Baclofen	Spasticity.	Not Approved	New evidence of clinically relevant efficacy	25 June 2015
M03AX01	Botulinum toxin	Focal dystonias.	Approved for use in carefully selected patients. Only to be administered by suitably experienced practitioners.	New evidence with clinical relevant/well defined endpoints and well described dosage regimens	30 June 2016
M03AX01	Botulinum toxin	Spastic cerebral palsy.	Not Approved	 New evidence with clinical relevant/well defined endpoints and well described dosage regimens 	Re-review: 30 June 2016
M05BA	Bisphosphonates Zoledronate, Ibandronic acid	Malignant bone disease in multiple myeloma.	Approved	New evidence of harm	25 July 2013
M05BA03	Pamindronate	Hypercalcaemia of malignancy.	Approved	n/a	20 September 2007
M05BA04	Alendronate	Osteogenesis imperfect.	Not Approved	Evidence of efficacy and safety	25 July 2013
M05BA04	Alendronate	Paget's.	Not Approved	New high quality adequately powered trials providing evidence addressing clinically important parameters New safety concerns	September 2007
		N NERVOUS SYSTEM			
N03AG04	Vigabatrin	Refractory partial epilepsy.	Not Approved	 Good quality evidence to support the efficacy and safety in infantile spasms. 	3 December 2009

ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
N03AG04	Vigabatrin	Infantile spasms.	Not Approved	Good quality evidence to support the efficacy and safety in infantile spasms.	3 December 2009
N03AX11	Topiramate	Initial therapy (epilepsy).	Not Approved	 New evidence, re: clinical efficacy of topiramate vs. alternatives as add-on therapy for resistant epilepsy New evidence, re: efficacy in comparison with alternatives as initial therapy for epilepsy, where the current evidence supports using the alternative agents 	3 December 2009
N03AX11	Topiramate	Add-on therapy for resistant epilepsy.	Approved	Evidence that the product is accounting for disproportionate amount of anti-epileptic spend	26 March 2015
N03AX14	Levetiracetam	Add-on therapy for resistant epilepsy.	Not Approved	Price Data in HIV patients	25 June 2015
N03AX12/ N03AX16	α2δ calcium channel ligands Gabapentin,	Patients with peripheral neuropathy refractory or intolerant to standard of care (e.g. amitriptyline; or	Approve – Special Access Special access may be granted on recommendation by PTC in the refractory or intolerant setting.	New evidence in the refractory setting Alternative indications	30 January 2020
	Pregabalin	carbamazepine)	, and the second		
N04BC04/ N04BC05 G02CB01	Ropinarole, Pramipexole, Bromocriptine	Parkinson's disease.	Approved for use as add-on therapy to levodopa. The choice of dopamine agonists and selegiline will depend on the lowest tender price.	Decrease in relative cost New safety data	27 November 2008
N05AH03	Olanzapine, IM	Emergency management of psychotic conditions.	Not Approved	New evidence of superior efficacy to suitable alternatives in patients with severe adverse reactions to FGAs	03 December 2009
N05AH04	Quetiapine	Third-line Schizophrenia.	Not Approved Amisulpiride Approved for this indication.	• Price	15 September 2016

	TERTIARY AND QUATERNARY LEVEL ESSENTIAL MEDICINES RECOMMENDATIONS						
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED		
N05AX08	Risperidone long acting injection	Schizophrenia.	Not Approved	Price similar to current standard of care	31 March 2016		
N05AL05	Amisulpride	Psychosis.	Approved for use as an appropriate alternative to existing agents in patients with negative symptoms failing first and second generation antipsychotics.	New information suggesting adequate comparative efficacy vs. older agents such as sulpiride itself, or new safety information	03 December 2009		
N05AX12	Aripiprazole	Schizophrenia in children.	 Approved for use as a third-line agent in children with psychotic disorders who are intolerant to typical and atypical antipsychotic agents with: Obesity, defined as BMI ≥ 30 or age appropriate measures, or Excessive weight gain, if associated with metabolic syndrome in adherent patients on other atypical antipsychotics, not responsive to other interventions (e.g. dietary management and/or physical exercise). Aripiprazole be initiated, in these cases, in consultation with or, where available, by a subspecialist (i.e. child and adolescent psychiatrist) 	New evidence of efficacy in children and adolescents	29 November 2013		
N05BA12	Alprazolam	"As required" adjunctive medication in the treatment of panic disorder.	Approved for panic disorder only. To be prescribed by a psychiatrist.	Any efficacy, safety or cost data	September 2010		
N05CF01/ N05CF02	Benzodiazepine related drugs Zopiclone, Zolpidem	Short-term use for insomnia associated with a primary psychiatric condition.	Not Approved	If the price of z-drugs were reduced to within an acceptable distance of the price of oxazepam, consideration would be given to including these on the EML	03 December 2009		
N06AX12	Buproprion	Major depressive disorder.	Approved for use as a third-line treatment of major depressive disorder and anxiety associated with depression. To be prescribed by a psychiatrist only. The cheapest of bupropion or venlafaxine to be used.	• n/a	27 January 2011		

	TER	TIARY AND QUATERNAR	Y LEVEL ESSENTIAL MEDICINES R	ECOMMENDATIONS	
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED
N06AX16	Venlafaxine	Major depressive disorder.	Approved for use as a third-line treatment of major depressive disorder and anxiety associated with depression. To be prescribed by a psychiatrist only. The cheapest of bupropion or venlafaxine to be used.	New evidence of harm, or a revision in the price of bupropion to make it more economically favourable	27 January 2011
N06DX01	Memantine	Alzheimer's Disease.	Not Approved	Evidence of true clinical benefit in terms of quality if life for patients and care- givers	10 July 2008
		R RESPIRATORY SYST	EM		
R03BB04/ R03BB06	Long acting muscarinic antagonists (LAMA) Tiotropium Glycopyrroniu m	Chronic Obstructive Pulmonary Disease (COPD).	Not Approved	Price	14 December 2017
R03DC03	Montelukast	Chronic management of severe uncontrolled asthma.	 Approved for use in: In adults (>12 years) with difficult to control asthma despite receiving high dose inhaled steroids and long-acting β2 agonist, a trial of low dose sustained release theophylline should be tried before use of montelukast. If there is no response to low dose theophylline, a 2-week trial of montelukast may be used. In children between 6 and 12 years of age with severe uncontrolled asthma despite being on high dose corticosteroids and long acting β2 agonist, a 2-week trial of montelukast could be considered. In children less than 6 years with severe uncontrolled asthma on high dose inhaled 	Properly randomized efficacy and safety comparative studies of LTRA, low dose sustained release theophyllines and long acting beta2 agonist at all ages	13 March 2008

	TERTIARY AND QUATERNARY LEVEL ESSENTIAL MEDICINES RECOMMENDATIONS						
ATC CODE	MEDICINE	INDICATION	NEMLC RECOMMENDATION	REVIEW INDICATORS	DATE RATIFIED		
			corticosteroids, a 2-week trial of montelukast could be considered. If no benefit can be demonstrated after this period, montelukast should be discontinued.				
		S SENSORY ORGANS					
S01LA04	Ranibizumab	Sub-retinal neovascular membranes and non-resolving macular odema.	Not Approved Bevacizumab to be agent for this indication	None	10 December 2015		
		V VARIOUS					
V03AC03	Deferasirox	Treatment of transfusional iron overload	Approved Added as an oral alternative to deferoxamine.	n/a	15 September 2016		
V03AF03	Folinic acid, intravenous	Adjuvant colorectal cancer.	Approved	n/a	27 November 2008		
V03AE	Lanthanum carbonate, Sevelamer	Hyperphosphataemia in patients with chronic renal failure.	Approved – Special Access Special Access may be granted on recommendation by the PTC.	Evidence that the use of non-calcium-based phosphate binders significantly reduces all-cause or cardiovascular mortality and/or cardiovascular comorbidities in patients with ESRD Reduction in cost of sevelamer through price reduction or the introduction of generic equivalents	25 June 2015		
V03AF01	Mesna	Haemorrhagic cystitis post high dose cyclophosphamide/ifosfamide	Approved	n/a	11July 2019		

Abbreviations:

ACTH: Adrenocorticotropic hormone **ARB:** Angiotensin II receptor blocker

AR: Antiretroviral

ATAC: Arimidex, tamoxifen, alone or in combination **ATC:** Anatomical Therapeutic Chemical Classification

BCG: Bacille Calmette-Guerin

BIG 1-98: Breast International Group 1-98 **COCs:** Combined oral contraceptives

COPD: Chronic Obstructive Pulmonary Disease **DLBCL:** Diffuse large B-cell non-Hodgkins lymphoma **DMARD:** Disease-modifying antirheumatic drugs

DoH: Department of Health
EML: Essential Medicine List
ESRD: End-stage renal disease
FGAs: First generation antipsychotics

FL: Follicular lymphoma

GCSF: Granulocyte colony stimulating factor

GFR: Glomerular filtration rate

GnRH: Gonadotrophin-releasing hormones

HIV: Human Immunodeficiency Virus

HR-ALL: High-risk Acute Lymphoblastic Leukaemia

IPI: International Prognostic Index

ITP: Immune Thrombocytopenic Purpura

IVF: In-vitro Fertilisation

IVIG: Intravenous Immunoglobulin LTRA: Leukotriene receptor antagonists

mBC: Metastatic breast cancer

MRSA: Methicillin-resistant Staphylococcus aureus

NPH: Neutral Protamine Hagedorn

PTC: Pharmaceutical and Therapeutics Committee

RA: Rheumatoid arthritis

RCT: Randomised controlled trials **RSV**: Respiratory syncytial virus

SEP: Single exit price

TEAM: Tamoxifen Exemestane Adjuvant Multinational

VCZ: Voriconazole

VTD: Bortezomib/thalidomide/corticosteroids

VHF: Viral haemorrhagic fever

WCC: White cell count

NOTE: General review indicators include, new evidence on efficacy, effectiveness or safety and significant price changes.

NEMLC ratified Summary and Review documents can be requested as required from: SAEDP@health.gov.za OR Janine.Jugathpal@health.gov.za