Arden and Greater East Midlands Commissioning Support Unit in association with Lincolnshire Clinical Commissioning Groups, Lincolnshire Community Health Services, United Lincolnshire Hospitals Trust and Lincolnshire Partnership Foundation Trust

Lincolnshire Prescribing and Clinical Effectiveness Bulletin

Volume 10; Number 9 **July 2016**

What's new this month?

- **Insulin degludec 100 iu/liraglutide 3.6mg injection (*Xultophy*) has been reviewed by PACEF and the status has changed from RED-RED to AMBER (for specialist initiation only); it is now approved for inclusion in the *Lincolnshire Joint Formulary* (see page 3).**
- **Wherever prednisolone is indicated, standard release 1mg and 5mg tablets should be considered first line. If the patient is experiencing difficulty with swallowing even small tablets, prednisolone 1mg and 5mg tablets can be dispersed in water to make a fine suspension (unlicensed use). Where a soluble 5mg tablet or oral suspension formulation is unavoidable, prednisolone 5mg in 5ml oral suspension should be preferred as the lower cost option, assuming that the strength is appropriate. It is approved for use through the *Lincolnshire Joint Formulary*; designation GREEN (see page 5).**
- **Low cost generic standard release quetiapine tablets remain the preferred first line option in most patients where quetiapine is clinically indicated. However, lower cost modified release brands of quetiapine are available and should be preferred in patients requiring a modified release product. The lower cost brands approved by PACEF and included in the *Lincolnshire Joint Formulary* are *Ebesque XL*, *Biquelle XL Mintreleq XL* and *Zaluron XL*; of these, *Biquelle XL, Mintreleq XL* and *Zaluron XL* are the lowest cost. All of these products are designated GREEN in all strengths and should be prescribed by brand (see page 6).**
- **Propantheline 15mg tablet (*Pro-Banthine*) is the only anticholinergic with a marketing authorisation for hyperhidrosis. Following review, the product has been re-designated GREEN from AMBER and can now be initiated by GPs (see page 7).**

CONTENTS

SUMMARY OF PACEF DECISIONS: *May 2016 Update*

Device, Dressing or Drug	Indication(s)	Traffic Light and *Joint Formulary* Status
Abiraterone 250mg tablets (*Zytiga*) (Janssen-Cilag Ltd)	For use with prednisone or prednisolone for the treatment of: (1) metastatic castration	RED Included in the *Lincolnshire Joint Formulary* for both indications

	resistant prostate cancer in adult men who are asymptomatic or mildly symptomatic after failure of androgen deprivation therapy in whom chemotherapy is not yet clinically indicated. (2) metastatic castration resistant prostate cancer in adult men whose disease has progressed on or after a docetaxel-based chemotherapy regimen.	subject to NICE criteria.
Doxorubicin hydrochloride liposomal pegylated concentrate for solution for infusion 2mg per 1ml (*Caelyx*) (Janssen-Cilag Ltd)	For advanced ovarian cancer when platinum-based chemotherapy has failed.	RED Approved for inclusion on the *Lincolnshire Joint Formulary* for recurrent ovarian cancer.
Gemcitabine solution for Infusion/powder for solution for infusion (non-proprietary)	For the treatment of locally advanced or metastatic epithelial ovarian cancer which has relapsed after a recurrence-free interval of at least 6 months following previous platinum-based therapy (in combination with carboplatin)	RED-RED Not approved for inclusion in the *Lincolnshire Joint Formulary* for this indication.
Insulin degludec 100 iu/liraglutide 3.6mg injection (*Xultophy*) (Novo Nordisk)	For the treatment of adults with type 2 diabetes to improve glycaemic control in combination with oral glucose lowering medicines when these alone or combined with basal insulin do not provide adequate glycaemic control.	AMBER for specialist initiation only. Approved for inclusion in the *Lincolnshire Joint Formulary*.
Paclitaxel solution for infusion (non-proprietary)	For the treatment of ovarian cancer in combination with cisplatin. For the treatment of metastatic ovarian cancer where platinum-containing therapy has failed.	RED Approved for inclusion in *Lincolnshire Joint Formulary.*
Prednisolone oral solution 5mg/5ml (*Prednisolone Dompe*)	For conditions requiring systemic corticosteroid therapy.	GREEN subject to prescribing guidance. Included in the *Lincolnshire Joint Formulary.*
Prednisolone oral solution 10mg/1ml (*Prednisolone Dompe*)	For conditions requiring systemic corticosteroid therapy.	RED-RED Not approved for inclusion in the *Lincolnshire Joint Formulary*.
Propantheline 15mg tablets *(Pro-Banthine)*	Hyperhidrosis	GREEN Included in the *Lincolnshire Joint Formulary* for this indication.
Quetiapine MR tablets 50mg, 150mg, 200mg, 300mg and 400mg (*Biquelle XL*) (Aspire Pharma)	For the treatment of schizophrenia, bipolar disorder and add-on treatment of major depressive episodes in patients with major depressive disorder	GREEN Approved for inclusion in the *Lincolnshire Joint Formulary.* Prescribe by brand. Standard release quetiapine preferred first line.
Quetiapine modified release tablets 50mg, 200mg, 300mg and 400mg (*Ebesque XL*) (DB Ashbourne)	For the treatment of schizophrenia, bipolar disorder and add-on treatment of major depressive episodes in patients with major depressive disorder	GREEN Approved for inclusion in the *Lincolnshire Joint Formulary.* Prescribe by brand. Standard release quetiapine preferred first line.
Quetiapine modified release tablets 50mg, 150mg, 200mg, 300mg and 400mg (*Mintreleq XL*) (CEB Pharma Ltd)	For the treatment of schizophrenia, bipolar disorder and add-on treatment of major depressive episodes in patients with major depressive disorder	GREEN Approved for inclusion in the *Lincolnshire Joint Formulary.* Prescribe by brand. Standard release quetiapine preferred first line.

Quetiapine modified release tablets 50mg, 150mg, 200mg, 300mg and 400mg (*Seroquel XL*) (Astra Zeneca Ltd)	For the treatment of schizophrenia, bipolar disorder and add-on treatment of major depressive episodes in patients with major depressive disorder	RED-RED Not approved for inclusion in the *Lincolnshire Joint Formulary.*
Quetiapine modified release tablets 50mg, 150mg, 200mg, 300mg and 400mg (*Sondate XL*) (TEVA UK Ltd)	For the treatment of schizophrenia, bipolar disorder and add-on treatment of major depressive episodes in patients with major depressive disorder	GREEN Approved for inclusion in the *Lincolnshire Joint Formulary.* Prescribe by brand. Standard release quetiapine preferred first line.
Quetiapine modified release tablets 50mg, 200mg, 300mg and 400mg (*Tenprolide XL*) (Actavis Ltd)	For the treatment of schizophrenia, bipolar disorder and add-on treatment of major depressive episodes in patients with major depressive disorder	RED-RED Not approved for inclusion in the *Lincolnshire Joint Formulary*
Quetiapine MR tablets 50mg, 150mg, 200mg, 300mg and 400mg (*Zaluron XL*) (Fontus Health)	For the treatment of schizophrenia, bipolar disorder and add-on treatment of major depressive episodes in patients with major depressive disorder	GREEN Approved for inclusion in the *Lincolnshire Joint Formulary.* Prescribe by brand. Standard release quetiapine preferred first line.
Topotecan solution for infusion/powder for solution for infusion (Non-proprietary/ *Hycamtin*) (Novartis Pharmaceuticals Ltd)	For metastatic ovarian cancer when first line or subsequent treatment has failed.	RED-RED Not approved for inclusion in the *Lincolnshire Joint Formulary.*
Trabectedin powder for solution for infusion 250microgram and 1mg (*Yondelis*) (Pharma Mar S.A.)	For treatment of relapsed platinum-sensitive ovarian cancer (in combination with pegylated liposomal doxorubicin).	RED-RED Not approved for inclusion in the *Lincolnshire Joint* Formulary for this indication.

This *Bulletin* has been created specifically to convey details of decisions taken at the Prescribing and Clinical Effectiveness Forum (PACEF) to all stakeholders across the Lincolnshire Healthcare Community in both primary and secondary care. Back issues of the *PACE Bulletin* and other PACEF publications are available through the PACEF website (http://lincolnshire-pacef.nhs.uk). Electronic copies of the *PACE Bulletin* are circulated to a wide readership via email. If you are not currently on our distribution list and wish to receive regular copies of PACEF publications please contact Sandra France on sandra.france@gemcsu.nhs.uk.

Google searching can be a quick and effective way of finding back numbers of the *PACE Bulletin* relevant to a specific topic of interest. Searchers are advised to use the official version of the *Bulletin* available from the PACEF website rather than depend on a potentially unreliable draft or variant found through Google or an alternative search engine.
The *Lincolnshire Joint Formulary* is available on line and is fully searchable; it can be accessed at www.lincolnshirejointformulary.nhs.uk

RED-RED: This signifies that a product is **not recommended** for prescribing in **either** primary or secondary care. All new products are classified as RED-RED pending assessment by PACEF.
RED: This signifies that a product has been approved for use within secondary care, tertiary care or a primary care hosted specialist service only and **should not be routinely prescribed in primary care**. RED drugs may be used within ULHT or LPFT subject to approval for use within each Trust. ULHT and LPFT reserve the right to determine whether or not RED drugs will be used within their Trusts. RED classification does not automatically signify that a drug will be available within secondary/tertiary care.
AMBER: This signifies that a drug has been approved for use in primary care **subject to specialist initiation; a shared care guideline (SCG) may also be required**. The main purpose of the SCG will be to clearly define both specialist and GP responsibilities. Not all AMBER drugs that require SCGs are currently covered by formal documents; PACEF are working to rectify this.
GREEN: This signifies a product that is **approved for initiation in either primary or secondary care.**

REVIEW: *INSULIN DEGLUDEC AND LIRAGLUTIDE 100 UNITS/3.6MG PER ML 3ML PRE-FILLED PEN (XULTOPHY)*

Insulin degludec 100 iu/liraglutide 3.6mg injection (*Xultophy*) has been reviewed by PACEF and the status has changed from RED-RED to AMBER (for specialist initiation only); it is now approved for inclusion in the *Lincolnshire Joint Formulary.*

University Hospitals of Leicester have approved insulin degludec/liraglutide (*Xultophy*) for use within licensed indications for patients who are either:

(1) injection therapy naive with a BMI>35 and an HbA1c >9% despite optimised oral therapy.
(2) or established on GLP-1 analogue alone or insulin therapy alone with BMI>35 and an HBA1c > 8%.
(3) or established on insulin with an HbA1c >7.5% on >50 units of insulin with a BMI >35.

PACEF were asked to review the current RED-RED status of insulin degludec/liraglutide (*Xultophy*) in view of the most recent evidence to determine whether similar criteria for use could be agreed in Lincolnshire.

Insulin degludec 100 units/liraglutide 3.6mg/mL injection (*Xultophy*) is the first fixed dose combination of an insulin plus a glucagon-like peptide-1 (GLP-1) analogue to gain a UK marketing authorisation. It is licensed for the treatment of adults with type 2 diabetes to improve glycaemic control in combination with oral glucose lowering medicines when these alone or combined with basal insulin do not provide adequate glycaemic control.

Supporting evidence for *Xultophy* comes from the DUAL series of 26 week and 52 week trials comparing the efficacy of the *Xultophy* combination with either insulin degludec or liraglutide prescribed alone in patients receiving concomitant therapy with other antidiabetic medication. Results from these trials demonstrate a statistically significant reduction in HbA1c levels beyond that achieved with either insulin degludec or liraglutide therapy alone and confirm that combination insulin degludec/liraglutide therapy is potentially more effective than each of the components prescribed separately. Secondary outcome data from the trials also demonstrates a reduction in the dose of insulin required compared to insulin degludec prescribed alone. Leicestershire Therapeutic Advisory Service concluded that the DUAL studies showed a high level of effectiveness in terms of HbA1c lowering with advantages in terms of less weight gain and reduced insulin doses. In addition, the DUAL 2 trial demonstrates a substantial reduction in HbA1c of 1.9%, weight loss and lower rates of hypoglycaemia and nausea in the combination group compared to liraglutide monotherapy alone.

In terms of adverse effects, *Xultophy* demonstrates a lower risk of hypoglycaemia than insulin alone, but a higher risk than would be expected with liraglutide therapy. By contrast the incidence of GI side effects is lower with the combination product compared to liraglutide alone, probably due to the smaller incremental dose increases possible within the restriction of the fixed dose combination.

There is no comparative data between *Xultophy* and any other insulin/GLP-1 combination. There is also a lack of long term safety and efficacy data.

Xultophy contains 1 unit of insulin degludec and 0.036mg liraglutide in each dose step (100units/3.6mg/mL). The MHRA *Drug Safety Update* for April 2015 has already identified *Xultophy* as a high strength fixed combination insulin product presenting a particularly high risk of error. Any fixed dose combination also has the disadvantage of limited flexibility of dosage (for example, the dose of one component cannot be altered without altering the dose of the other).

At the maximum dose of 50 units daily, *Xultophy* is £30 cheaper per month than the individual cost of insulin degludec and liraglutide prescribed separately. A significantly lower cost option would be to prescribe an alternative, long-acting conventional insulin in combination with liraglutide prescribed separately.

PACEF Recommendation:
PACEF acknowledge that it is now established practice to use insulin in combination with a GLP-1 analogue and that the *Xultophy* dose steps enable a much more sensitive dosing of liraglutide and a potentially lower dose of insulin at a lower cost than the two components prescribed separately. Nonetheless, where combination therapy is considered necessary, conventional NPH insulins rather than insulin analogues in combination with a GLP-1 analogue should be preferred. Subject to the Leicester initiation criteria (see above), insulin degludec 100 units/liraglutide 3.6mg/mL injection (*Xultophy*) is designated AMBER for specialist initiation only and is approved for inclusion in the *Lincolnshire Joint Formulary.*

NEW FORMULATION ASSESSMENT: *PREDNISOLONE 5MG IN 5ML AND 10MG IN 1ML ORAL SOLUTION (PREDNISOLONE DOMPE)*

Wherever prednisolone is indicated, standard release 1mg and 5mg tablets should be considered first line. If the patient is experiencing difficulty with swallowing even small tablets, prednisolone 1mg and 5mg tablets can be dispersed in water to make a fine suspension (unlicensed use). Where a soluble tablet or oral suspension formulation is unavoidable, prednisolone 5mg in 5ml oral suspension should be preferred as the lower cost option, assuming that the strength is appropriate.

Regular readers will be aware of the alarming escalation in the price of prednisolone soluble 5mg tablets (£53.48 for 30 in the current *Drug Tariff*). In response to this, standard PACEF advice is to review all patients currently prescribed prednisolone soluble tablets 5mg with a view to changing to a lower cost prescription wherever possible. Both prednisolone 1mg and 5mg tablets are relatively small and do not present swallowing difficulties for most patients. Additionally, prednisolone 1mg and 5mg tablets can be dispersed in water to make a fine suspension (unlicensed use). The potential saving in Lincolnshire if only half of existing prescriptions for prednisolone soluble 5mg tablets were changed to standard prednisolone tablets is over £120,000pa.

In addition to the option to switch to a lower cost solid dose formulation, prednisolone oral suspension 5mg in 5ml and 10mg in 1ml are also now available. A cost comparison reveals that oral suspension remains high cost, although the 5mg in 5ml strength is significantly lower cost than prednisolone soluble 5mg tablets:

Product	**Cost (£) per pack**	**Dose**	**Cost per course (5 days)**
Prednisolone 5mg tablets	£0.97 (28)	30mg daily	£1.04
Prednisolone soluble tablets	£53.48 (30)	30mg daily	£53.48
Prednisolone oral solution 5mg/5ml	£11.41 (10 x 5ml)	30mg daily	£34.23
Prednisolone oral solution 10mg/ml	£55.50 (30ml)	30mg daily	£27.75 (15ml)*

*Cost of prednisolone solution 10mg/ml is quoted for quantity of liquid required per course. However, the product is supplied in a glass bottle containing 30ml, with child-resistant, tamper-evident plastic screw cap, a 5ml graduated oral dosing syringe and an adaptor. Thus it will not be dispensed in smaller quantities than the original pack of 30ml. As a result, the actual cost of a 30mg daily dose for 5 days will be £55.50.

No stability studies have been conducted regarding the administration of prednisolone oral solution 5mg in 5ml or 10mg in 1ml via enteral feeding tube (NG, PEG etc.), although the manufacturer has advised that this constitutes appropriate use.

PACEF Recommendation:
Wherever prednisolone is indicated, standard release 1mg and 5mg tablets should be considered first line. If the patient is experiencing difficulty with swallowing even small tablets, prednisolone 1mg and 5mg tablets can be dispersed in water to make a fine suspension (unlicensed use). Where a soluble tablet or oral suspension formulation is unavoidable, prednisolone 5mg in 5ml oral suspension should be preferred as the lower cost option, assuming that the strength is appropriate. Subject to these restrictions, prednisolone oral solution 5mg in 5ml is approved for use through the *Lincolnshire Joint Formulary*; designation GREEN. Prednisolone oral solution 10mg in 1ml is potentially even higher cost than prednisolone soluble 5mg tablets and is not approved for use; designation RED-RED.

UPDATED COST COMPARISON: *QUETIAPINE SUSTAINED RELEASE TABLETS*

Low cost generic standard release quetiapine tablets remain the preferred first line option in most patients where quetiapine is clinically indicated. However, lower cost modified release brands of quetiapine are available and should be preferred in patients requiring a modified release product. The lower cost brands approved by PACEF and included in the *Lincolnshire Joint Formulary* are *Ebesque XL*, *Biquelle XL* *Mintreleq XL, Sondate XL* and *Zaluron XL*; of these, *Sondate XL* and *Zaluron XL* are the lowest cost. All of these products are designated GREEN in all strengths.

A recent reduction in the price of the quetiapine modified release preparation *Sondate XL* has necessitated a review of the PACEF preferred list of lower cost quetiapine MR formulations. Following review of an updated cost comparison, five products now emerge as lower cost: *Biquelle XL*, *Ebesque XL*, *Mintreleq XL, Sondate XL* and *Zaluron XL*; of these, *Sondate XL* and *Zaluron XL* emerge as the lowest cost options.

Updated PACEF Recommendation
Low cost generic standard release quetiapine tablets remain the preferred first line option in most patients where quetiapine is clinically indicated. However, lower cost modified release brands of quetiapine are now available and should be preferred in patients requiring a modified release product. The lower cost brands approved by PACEF and included in the *Lincolnshire Joint Formulary* are *Biquelle XL*, *Ebesque XL*, *Biquelle XL, Mintreleq XL, Sondate XL* and *Zaluron XL*; of these, *Sondate XL* and *Zaluron XL* emerge as the lowest cost options. All of these products are designated GREEN in all strengths. In view of a significant reduction in price Sondate XL is re-designated GREEN rather than RED-RED and is approved for use through the Lincolnshire Joint Formulary. Practices currently prescribing higher cost modified release quetiapine preparations are urged to consider switching to their preferred lower cost brand. Lower cost MR quetiapine should be prescribed by brand name to ensure a lower NHS reimbursement price is paid. Practices are advised not to issue open generic prescriptions for quetiapine MR or to issue branded prescriptions for higher cost products such as *Seroquel XL* or *Tenprolide XL*. Both of these products are designated RED-RED and not included on the *Lincolnshire Joint Formulary.*

REVIEW: *PROPANTHELINE BROMIDE 15MG TABLETS (PRO-BANTHINE)*

Propantheline 15mg tablet (*Pro-Banthine*) is the only anticholinergic with a marketing authorisation for hyperhidrosis. Following review, the product is re-designated GREEN from AMBER and can now be initiated by GPs.

This review is an updated version of a New Drug Assessment that originally appeared in *PACE Bulletin* Vol 9 No 2 (February 2015).

Propantheline 15mg tablets (*Pro-Banthine*) are currently the only licensed oral treatment for hyperhidrosis. Published guidance on the management of hyperhidrosis from the International Hyperhidrosis Society recommends the use of oral antimuscarinics as a treatment option. NICE bemoan the lack of clinical trial evidence supporting the use of these agents for this indication, but recognise that specialist opinion is divided.

Hyperhidrosis or excessive sweating is linked to over activity of the sympathetic nervous system. There are three main types:

- Primary or focal hyperhidrosis is a common disorder affecting approximately 1% of the population. It commonly affects the palms, soles of the feet and the axillae.
- Generalised hyperhidrosis in a well patient with a classical history of sweating starting in late childhood and improving in middle age is seldom related to an underlying medical condition. If the patient is unwell or if sweats occur mainly at night then it is likely to be linked to a secondary cause (e.g. Parkinson's disease, thyroid disease, diabetes, lymphoma) or caused by medication (e.g. SSRI's, opioids, oestrogens).
- Gustatory hyperhidrosis is induced by food or drink and can be associated with diabetes.

The Primary Care Dermatology Society recommends that oral anticholinergics should be considered first line for the management of generalised hyperhidrosis. Propantheline is recommended as the only licensed product starting at an initial dose of 15mg once or twice a day and increasing according to response and tolerance. Modified release oxybutynin is a possible alternative, but is not licensed for this indication. Other treatments occasionally used include beta-blockers that cross the blood-brain barrier (e.g. propranolol 40 mg three times a day) or diltiazem (60 mg three times a day). .

The limiting factor on the use of anticholinergics for this, and indeed any, indication is the prevalence of adverse effects which can prove intolerable to some patients. In addition, propantheline, as an antimuscarinic, is also implicated in a number of drug interactions that can contraindicate its use in certain patient groups.

A cost comparison between propantheline 5mg tablets and alternative anticholinergic options reveals that propantheline is both the lowest cost and the only licensed option.

Drug	**Daily dose**	**Cost (£) 28 days**
Propantheline 15mg tablets (*Pro-Banthine*)	15mg three times daily	£15.55
Oxybutynin 10mg MR tablets (*Lyrinel XL*)	10mg daily	£25.70
Glycopyrronium bromide 2mg/5ml oral suspension	2mg up to three times daily	£472.16*

*Price based on 2mg/5ml oral suspension, unlicensed special part VIIIB *Drug Tariff*.

PACEF Recommendation

PACEF recognise the prominence of oral anticholinergics in a range of national and international guidelines defining best practice in the treatment of hyperhidrosis. As the only anticholinergic with a marketing authorisation for this indication, propantheline 15mg tablets (*Pro-Banthine*) are approved for use and designated GREEN. They are included in the *Lincolnshire Joint Formulary* for this indication. Although propantheline is also licensed for the treatment of GI disorders characterised by smooth muscle spasm and adult enuresis, it is only available on the *Formulary* for hyperhidrosis.

NICE UPDATE

NICE Technology Appraisal	Guidance	PACEF Recommendation
TA 387: *Abiraterone for treating metastatic hormone-relapsed prostate cancer before chemotherapy is indicated* (April 2016)	Abiraterone in combination with prednisone or prednisolone is recommended, within its marketing authorisation, as an option for treating metastatic hormone-relapsed prostate cancer: in people who have no or mild symptoms after androgen deprivation therapy has failed, and before chemotherapy is indicated.	Abiraterone 250mg tablets (*Zytiga*) are already available through the *Lincolnshire Joint Formulary* designated RED for use in treatment of castration-resistant metastatic prostate cancer previously treated with a docetaxel-containing regimen (see NICE TA 259). Abiraterone 250mg tablets (*Zytiga*) hold a marketing authorisation for use with prednisone or prednisolone for the treatment of: 1. metastatic castration resistant prostate cancer in adult men who are asymptomatic or mildly symptomatic after failure of androgen deprivation therapy in whom chemotherapy is not yet clinically indicated. 2. metastatic castration resistant prostate cancer in adult men whose disease has progressed on or after a docetaxel-based chemotherapy

		regimen. Abiraterone 250mg tablets (*Zytiga*) are now designated RED for both of these indications and are available through the Lincolnshire Joint Formulary within NICE approved treatment criteria.
TA 389:*Topotecan, pegylated liposomal doxorubicin hydrochloride, paclitaxel, trabectedin and gemcitabine for treating recurrent ovarian cancer (April 2016)*	Paclitaxel in combination with platinum or as monotherapy is recommended within its marketing authorisation as an option for treating recurrent ovarian cancer. Pegylated liposomal doxorubicin hydrochloride (PLDH) as monotherapy is recommended within its marketing authorisation as an option for treating recurrent ovarian cancer. PLDH in combination with platinum is recommended as an option for treating recurrent ovarian cancer. The following are not recommended within their marketing authorisations for treating the first recurrence of platinum-sensitive ovarian cancer: • gemcitabine in combination with carboplatin • trabectedin in combination with PLDH • topotecan. Topotecan is not recommended within its marketing authorisation for treating recurrent platinum-resistant or platinum-refractory ovarian cancer.	Paclitaxel infusion is licensed for the treatment of a number of cancers including ovarian, breast, advanced non-small cell lung and AIDS related Kaposi's sarcoma. Generic preparations are available manufactured by Accord Healthcare Ltd, Hospira UK Ltd and Actavis UK Ltd. Paclitaxel is currently listed on the *Formulary* as a RED drug approved for use as stipulated under National Cancer Drugs Fund guidance and various NICE TAs. Pegylated liposomal doxorubicin hydrochloride (PLDH) concentrate for solution for infusion 2mg per 1ml (*Caelyx*) is designated RED and approved for inclusion on the *Formulary* for recurrent ovarian cancer. Gemcitabine solution for infusion/powder for solution for infusion (non-proprietary) is designated RED-RED and not approved for inclusion in the *Lincolnshire Joint Formulary* for the treatment of locally advanced or metastatic epithelial ovarian cancer which has relapsed after a recurrence-free interval of at least 6 months following previous platinum-based therapy (in combination with carboplatin). Trabectedin powder for solution for infusion 250microgram and 1mg (*Yondelis*) is designated RED-RED and not approved

		for inclusion in the *Lincolnshire Joint Formulary* for treatment of relapsed platinum-sensitive ovarian cancer (in combination with pegylated liposomal doxorubicin). Topotecan solution for infusion/powder for solution for infusion (Non-proprietary/ *Hycamtin*) is designated RED-RED and not approved for inclusion in the *Lincolnshire Joint Formulary* for metastatic ovarian cancer when first line or subsequent treatment has failed.

Acknowledgements

Many thanks to: Cathy Johnson, Interface Lead Pharmacist, Arden GEM Commissioning Support Unit, Robyn Thompson and Lisa Price, Senior Pharmacists United Lincolnshire Hospitals Trust for her help with the preparation of this *Bulletin.*

Stephen Gibson
Head of Prescribing and Medicines Optimisation (Lincolnshire)
Arden GEM Commissioning Support Unit

July 2016