**Therapeutic Use**
Sandostatin LAR and Somatuline Autogel are somatostatin analogues. Biological actions of somatostatin include inhibition of growth hormone and endocrine anti-secretory action. Sandostatin LAR and Somatuline Autogel are indicated for relief of symptoms associated to patients with neuroendocrine tumours (including carcinoid tumours).

(within NHS Gloucestershire this will also include the treatment of patients with acromegaly)

**Preparations**

**First Line**
Sandostatin LAR (octreotide) 10mg, 20mg and 30 mg vial
Store vials at 2-8°C protected from light
Can remain at room temperature on the day of injection, however suspension must only be prepared immediately prior to injection

**Second Line**
Somatuline Autogel (lanreotide) 60mg, 90mg and 120mg
First line in patients not suitable for Sandostatin LAR

**Dosage and administration**

**Choice of drug and any dose modifications will remain the responsibility of the Specialist Clinical Team within the Secondary Care Trust.**

**Sandostatin LAR (Octreotide)**
Administered every 28 days via deep intragluteal injections (alternating between the left and right gluteal muscle).

The usual starting dose is 20mg. If symptoms are well controlled and Chromogranin and urinary 5HIAA stable after the 3rd or 4th injection the dose should be reduced to 10mg.

**Somatuline Autogel (Lanreotide)**
**Administered every** 28 days via deep subcutaneous injection (alternating between the left and right gluteal muscle).

The usual starting dose is 60mg. If required the dose may be increased to 90-120mg every 4 weeks.
### Side-effects (refer to current BNF and product SPC for detailed information)

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Side-effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 10%</td>
<td>Diarrhoea, abdominal pain, nausea, constipation, bloating, flatulence, headaches, injection site reactions (including localised pain, swelling or rash), hyperglycaemia,</td>
</tr>
<tr>
<td>5-10%</td>
<td>Hypoglycaemia, bradycardia, dyspnoea, cholecystitis, rash, hair thinning, dizziness, pruritus,</td>
</tr>
<tr>
<td>1-5%</td>
<td>Asthenia, fatigue, tachycardia, dehydration,</td>
</tr>
<tr>
<td>Less than 1%</td>
<td>Skin nodules, hot flushes, malaise, increased sweating, leg pain, abnormal glucose tolerance, hyperglycaemia, increased sweating, decreased libido, acute pancreatitis, hypothyroidism, cardiovascular effects, symptoms resembling acute intestinal obstruction</td>
</tr>
</tbody>
</table>

### Contra-indications (refer to current BNF and product SPC for detailed information)

- Hypersensitivity to octreotide or any other of the product’s excipients.
- Hypersensitivity to lanreotide or any other of the product’s excipients.
- Minimal experience of using somatostatin analogues in pregnancy or breastfeeding, therefore use is not recommended. BNF reports possible effects on foetal growth.

### Cautions for Use (refer to current BNF and product SPC for detailed information)

Somatostatin analogues are known to impair glucose secretion. In patients with concomitant diabetes mellitus monitoring of glucose tolerance and antidiabetic treatment is recommended. Lanreotide has been associated with changes to thyroid function. Testing of thyroid function suggested where clinically indicated.

### Drug Interactions (refer to current BNF and product SPC for detailed information)

- May require change in diabetic medication (e.g., metformin, sulphonylureas, glitazones, glinides and insulins)
- Possible reduced intestinal absorption of ciclosporin
- Possible delayed absorption of cimetidine
- Possible increased bioavailability of bromocriptine
- Caution during co-administration of drugs mainly metabolised by CYP3A4 that have a low therapeutic index (e.g., carbamazepine, digoxin, warfarin and terfenidine)

### Training

**ALL** health professionals administering Sandostatin LAR injection require training in the reconstitution and administration of this preparation.

No specific training requirements required for the administration of Somatuline Autogel.

Please contact Donna Norman, Macmillan Rare Cancer Clinical Nurse Specialist on 07554330251 to arrange/facilitate training.
Aspects of care for which the Secondary Care Team is responsible

- To explain the risks and benefits to the patient and gain consent
- Choose and Initiate drug treatment
- Request GP to undertake shared care, providing copy of shared care guidance as necessary
- Provide the patient or carers with suitable written and verbal information about the chosen drug treatment, including benefits of treatment and possible side effects
- Test for responsiveness to somatostatin analogues by using a test dose of octreotide subcutaneously via a syringe driver for one week or TDS injection administered by the patient.
- Prescribe and administer the first two injections in hospital (in the rare case where a patient is too unwell to attend clinic, the patient may receive these at home or at the GP surgery with the support of the rare cancer clinical nurse specialist)
- Prescribe and supply the drug for the third injection. The Rare Cancer Specialist nurse will attend the GP surgery with the drug to provide the necessary training and support to enable the practice nurses to administer the third dose.
- Perform baseline ultrasound of gallbladder within three months of commencing treatment and repeat yearly or as otherwise indicated
- Monitor response to treatment and adjust does accordingly
- Prompt communication with advice to GP of any changes in treatment or dose requirements, results of any monitoring undertaken and assessment of adverse effects.
- Provide the GP with relevant contact information including clear arrangements for back-up advice and support.
- Report adverse events to the MHRA.

Monitoring in secondary care

- Evidence of disease control
- Assessment of symptoms
- Gall bladder ultrasound prior to treatment and yearly thereafter
- Annual thyroid function tests for patients receiving therapy for more than 12 months
- In patients who are stable three monthly reviews in oncology outpatients

Aspects of care for which the GP is responsible

- To contact the referring consultant without delay if they do not wish to enter in to a shared care agreement
- To be responsible for the prescribing and administration of the somatostatin analogue injection after the patient has received 3 doses issued by the local hospital.
- Prescribe one month of somatostatin analogue at a time
- To monitor serum glucose levels in diabetic patients and adjust diabetic medication accordingly
- Prompt referral back to the specialist clinical team if there is a change in the patients health status.
- Reporting to and seeking advice from the specialist clinical team on any aspect of the patients care which is of concern to the GP and may affect treatment.
- Report adverse effects to the specialist clinical team and MHRA.
Aspects of care for which the patient is responsible

- To ensure they have an understanding of the treatment
- To report any adverse reactions to the specialist nurse, hospital consultant or GP
- To report any altered blood glucose measurements to the specialist nurse, hospital consultant or GP

Cost of Sandostatin LAR:
Standard dose Monthly  cost 20mg = £706
Monthly cost 10mg = £427

Cost of Somatuline Autogel: 60mg injection = £551.00
Standard dose Monthly  cost 60mg = £551
Monthly cost 120mg = £937

(e-BNF 15/6/12)

Availability of back-up advice and support
Donna Norman- Macmillan Rare Cancer Clinical Nurse Specialist Tel: 08454222471 or 07554330251
Dr Ulahannan, Consultant Endocrinologist: 08454228602
Dr Farrugia, Medical Oncologist: 08454222596
Dr Nick Reed, Clinical Oncologist: 08454223186
Medicines Information Services: Gloucester 08454 226108 (Mon to Fri, 9 – 5.30pm)
                        Cheltenham 08454 223030 (Mon to Fri, 9 – 5.30pm)

This document has been produced by the 3 Counties Cancer Network on behalf of NHS Gloucestershire, Worcestershire and Herefordshire

Written by: Donna Norman May 2012                   Review date: August 2014
Additional comments by: Sue Robinson   June 2012

This guideline does not contain a complete list of indications, precautions, warnings etc. For further information please refer to the product Summary of Product Characteristics for full details.