The case study presented in this brochure is based on a fictional patient. Individual results may vary.

**Indication for Sandostatin® LAR®**

Sandostatin® LAR® (octreotide) is indicated for the treatment of patients with acromegaly in whom surgery is inappropriate or ineffective, or in the interim period until radiotherapy becomes fully effective.

Please see Important Safety Information on pages 6-11.
Consider the following patient

**MEET KARA**

**55-YEAR-OLD WOMAN WITH ACROMEGALY RECEIVING ONGOING THERAPY WITH SANDOSTATIN® LAR®**

**Current Condition:**

Kara has reached her treatment goals as determined by her doctor. Her acromegaly is biochemically controlled\(^1,2\) (GH <2.5 ng/mL; IGF-1 normalized for age and gender)

**Current Treatment:**

Sandostatin® LAR® 20 mg every 4 weeks\(^1\) (Kara has been on this dose for the past 8 months)

**GH Level:**

0.9 ng/mL\(^1,2\)

**IGF-1 Level:**

Stabilized at 200 ng/mL\(^3\)

**Symptoms:**

Occasional symptoms, such as joint pain, but the pain is not as frequent\(^1*\)

**Physician Recommendation:**

Reduce dose to Sandostatin® LAR® 10 mg every 4 weeks\(^1†\)

---

*In most patients, Sandostatin® LAR® markedly reduces the clinical symptoms of the disease, such as headache, perspiration, paresthesia, fatigue, osteoarthralgia, and carpal tunnel syndrome.\(^1\)

*Please see important dosing information on page 4.

**Important Notes:**

Even though Kara has reached her treatment goals, she will need to continue her Sandostatin® LAR® treatment.\(^1,4\)

**GH**, growth hormone; **IGF-1**, insulin-like growth factor 1.
WHAT SHOULD THE PATIENT KNOW?

For a patient who has reached biochemical control with Sandostatin® LAR®, like Kara has, the next step in the treatment journey is the maintenance phase. The goal of this phase is to keep GH and IGF-1 values at their current levels.¹

Control of GH and IGF-1 levels helps reduce the risk of serious health conditions caused by long-term exposure to elevated GH and IGF-1 levels, including⁵,⁶:

- Diabetes
- Hypertension
- Colon polyps
- Cardiovascular disease

Note: Sandostatin® LAR® does not treat these or other comorbidities or their symptoms. Continue to monitor patients for comorbidities during future visits.⁵,⁶

EMPHASIZE TO YOUR PATIENTS THAT ACROMEGALY IS A LONG-TERM ILLNESS, REQUIRING LIFELONG TREATMENT AND MONITORING.⁴

DURING MEDICAL THERAPY FOR ACROMEGALY, BIOCHEMICAL CONTROL INCLUDES GH <2.5 NG/ML AND IGF-1 NORMALIZED FOR AGE AND GENDER.¹,²
TREATMENT WITH SANDOSTATIN® LAR®

HOW IT WORKS
Sandostatin® LAR® is a somatostatin analogue. Somatostatin is the hormone in the brain that inhibits GH release. Sandostatin® LAR® stimulates the effects of natural somatostatin working at the tumor site to regulate GH secretion and tumor growth.

IMPORTANT DOSING INFORMATION
For a patient like Kara, who has reached the treatment goals set by her doctor, a dose decrease to 10 mg of Sandostatin® LAR® every 4 weeks may be considered if the following criteria apply:
- GH level consistently <1 ng/mL
- IGF-1 level normalized
- Disappearance of most reversible signs and symptoms of acromegaly after 3 months of treatment at the 20-mg dose of Sandostatin® LAR®

However, particularly in this group of patients, it is recommended to closely monitor adequate control of serum GH and IGF-1 concentrations and clinical signs/symptoms at this low dose of Sandostatin® LAR®.

For patients on a stable dose of Sandostatin® LAR®, assessment of GH and IGF-1 should be made every 6 months.

A LOOK AT EFFICACY
Sandostatin® LAR® is proven to help your patients reach their treatment goals by:
- Reducing GH levels
- Normalizing IGF-1 levels
- Causing a median reduction in tumor volume
- Keeping symptoms under control

IN ONE STUDY OF PATIENTS WITH ACROMEGALY TREATED FOR A MINIMUM OF 6 MONTHS, 2 OUT OF 3 PATIENTS TAKING SANDOSTATIN® LAR® SAW THEIR GH LEVELS SUCCESSFULLY REDUCED AND THEIR IGF-1 LEVELS NORMALIZED.

*For patients in whom, within this 3-month period, clinical symptoms and biochemical parameters (GH; IGF-1) are not fully controlled (GH concentrations still above 2.5 ng/mL), the dose may be increased to 30 mg every 4 weeks. If after 3 months, GH, IGF-1, and/or symptoms are not adequately controlled at a dose of 30 mg, the dose may be increased to 40 mg every 4 weeks.

†In most patients, Sandostatin® LAR® markedly reduces the clinical symptoms of the disease, such as headache, perspiration, paresthesia, fatigue, osteoarthralgia, and carpal tunnel syndrome.
CONTINUED MONITORING

Patients with acromegaly who have reached their treatment goals should pay close attention to how they are feeling. Instruct your patients to notify their doctor if symptoms start to come back or if they start experiencing side effects from the injections.

Note:
Closely monitor for adequate control of GH and IGF-1 levels and for clinical signs and symptoms of acromegaly for patients on a low dose of Sandostatin® LAR®. For patients on a stable dose of Sandostatin® LAR®, assessment of GH and IGF-1 should be performed every 6 months.¹

NURSING CONSIDERATIONS

For your patients who have achieved biochemical control with Sandostatin® LAR® therapy, review the following:

<table>
<thead>
<tr>
<th><strong>Acromegaly is a lifelong disease requiring lifelong treatment</strong>¹</th>
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<tbody>
<tr>
<td>- Review maintenance phase and why it is important</td>
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<table>
<thead>
<tr>
<th><strong>Continued treatment with Sandostatin® LAR®¹</strong></th>
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<table>
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<tr>
<th><strong>Continued biochemical monitoring¹</strong></th>
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<tr>
<th><strong>Importance of reporting signs and symptoms</strong></th>
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<tr>
<td>- Notify doctor of new symptoms or if existing symptoms worsen</td>
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<table>
<thead>
<tr>
<th><strong>Treatment side effects</strong></th>
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<tr>
<th><strong>Current medication list</strong></th>
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</table>
SANDOSTATIN® LAR® IMPORTANT SAFETY INFORMATION

Contraindications
Known hypersensitivity to octreotide or to any of the excipients (see list of excipients).

Special warnings and precautions for use
General
As GH-secreting pituitary tumors may sometimes expand, causing serious complications (e.g., visual field defects), it is essential that all patients be carefully monitored. If evidence of tumor expansion appears, alternative procedures may be advisable.

The therapeutic benefits of a reduction in growth hormone (GH) levels and normalization of insulin-like growth factor 1 (IGF-1) concentration in female acromegalic patients could potentially restore fertility. Female patients of childbearing potential should be advised to use adequate contraception if necessary during treatment with octreotide (see section Pregnancy, breastfeeding and fertility).

Thyroid function should be monitored in patients receiving prolonged treatment with octreotide.

Hepatic function should be monitored during octreotide therapy.

Cardiovascular related events
Common cases of bradycardia have been reported. Dose adjustment of medicinal products such as beta blockers, calcium channel blockers, or agents to control fluid and electrolyte balance, may be necessary (see section Interaction with other medicinal products and other forms of interaction).

Gallbladder and related events
Octreotide inhibits secretion of cholecystokinin, resulting in reduced contractility of the gallbladder and an increased risk of sludge and stone formation. Development of gallstones has been reported in 15 to 30% of long-term recipients of s.c. Sandostatin®. The prevalence in the general population (aged 40 to 60 years) is about 5 to 20%. Long-term exposure to Sandostatin® LAR® of patients with acromegaly or gastro-entero-pancreatic tumors suggests that treatment with Sandostatin® LAR® does not increase the incidence of gallstone formation, compared with s.c. treatment. Ultrasonic examination of the gallbladder before and at about 6-monthly intervals during Sandostatin® LAR® therapy is however recommended. If gallstones do occur, they are usually asymptomatic; symptomatic stones should be treated either by dissolution therapy with bile acids or by surgery.

Glucose metabolism
Because of its inhibitory action on growth hormone, glucagon, and insulin release, Sandostatin® LAR® may affect glucose regulation. Post-prandial glucose tolerance may be impaired. As reported for patients treated with s.c. Sandostatin®, in some instances, the state of persistent hyperglycemia may be induced as a result of chronic administration. Hypoglycemia has also been reported.

In patients with concomitant Type I diabetes mellitus, Sandostatin® LAR® is likely to affect glucose regulation, and insulin requirements may be reduced. In non-diabetics and type II diabetics with partially intact insulin reserves, Sandostatin® s.c. administration may result in increases in post-prandial glycaemia. It is therefore recommended to monitor glucose tolerance and antidiabetic treatment.
SANDOSTATIN® LAR® IMPORTANT SAFETY INFORMATION (cont)

In patients with insulinomas, octreotide, because of its greater relative potency in inhibiting the secretion of GH and glucagon than that of insulin, and because of the shorter duration of its inhibitory action on insulin, may increase the depth and prolong the duration of hypoglycemia. These patients should be closely monitored.

Nutrition
Octreotide may alter absorption of dietary fats in some patients.
Depressed vitamin B₁₂ levels and abnormal Schilling’s tests have been observed in some patients receiving octreotide therapy. Monitoring of vitamin B₁₂ levels is recommended during therapy with Sandostatin® LAR® in patients who have a history of vitamin B₁₂ deprivation.

Sodium content
Sandostatin® LAR® contains less than 1 mmol (23 mg) sodium per dose, i.e., is essentially “sodium-free.”

Interaction with other medicinal products and other forms of interaction
Dose adjustment of medicinal products such as beta blockers, calcium channel blockers, or agents to control fluid and electrolyte balance may be necessary when Sandostatin® LAR® is administered concomitantly (see Special warnings and precautions for use).
Dose adjustments of insulin and antidiabetic medicinal products may be required when Sandostatin® LAR® is administered concomitantly (see Special warnings and precautions for use).
Octreotide has been found to reduce the intestinal absorption of ciclosporin and to delay that of cimetidine.
Concomitant administration of octreotide and bromocriptine increases the bioavailability of bromocriptine.

Limited published data indicate that somatostatin analogs might decrease the metabolic clearance of compounds known to be metabolized by cytochrome P450 enzymes, which may be due to the suppression of growth hormone. Since it cannot be excluded that octreotide may have this effect, other drugs mainly metabolized by CYP3A4 and which have a low therapeutic index (e.g. quinidine, terfenadine) should therefore be used with caution.

Pregnancy, breastfeeding and fertility
Pregnancy
There is a limited amount of data (less than 300 pregnancy outcomes) from the use of octreotide in pregnant women, and in approximately one third of the cases the pregnancy outcomes are unknown. The majority of reports were received after postmarketing use of octreotide and more than 50% of exposed pregnancies were reported in patients with acromegaly. Most women were exposed to octreotide during the first trimester of pregnancy at doses ranging from 100-1200 micrograms/day of Sandostatin® s.c. or 10-40 mg/month of Sandostatin® LAR®. Congenital anomalies were reported in about 4% of pregnancy cases for which the outcome is known. No causal relationship to octreotide is suspected for these cases.
SANDOSTATIN® LAR® IMPORTANT SAFETY INFORMATION (cont)

Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity (see Preclinical safety data).

As a precautionary measure, it is preferable to avoid the use of Sandostatin® LAR® during pregnancy (see Special warnings and precautions for use).

Breastfeeding

It is unknown whether octreotide is excreted in human breast milk. Animal studies have shown excretion of octreotide in breast milk. Patients should not breastfeed during Sandostatin® LAR® treatment.

Fertility

It is not known whether octreotide has an effect on human fertility. Late descent of the testes was found for male offsprings of dams treated during pregnancy and lactation. Octreotide, however, did not impair fertility in male and female rats at doses of up to 1 mg/kg body weight per day (see Preclinical safety data).

Effects on ability to drive and use machines

Sandostatin® LAR® has no or negligible influence on the ability to drive and use machines. Patients should be advised to be cautious when driving or using machines if they experience dizziness, asthenia/fatigue, or headache during treatment with Sandostatin® LAR®.

Undesirable effects and adverse drug reactions

Summary of the safety profile

The most frequent adverse reactions reported during octreotide therapy include gastrointestinal disorders, nervous system disorders, hepatobiliary disorders, and metabolism and nutritional disorders. The most commonly reported adverse reactions in clinical trials with octreotide administration were diarrhea, abdominal pain, nausea, flatulence, headache, cholelithiasis, hyperglycemia and constipation. Other commonly reported adverse reactions were dizziness, localized pain, biliary sludge, thyroid dysfunction (e.g., decreased thyroid stimulating hormone [TSH], decreased total T4, and decreased free T4), loose stools, impaired glucose tolerance, vomiting, asthenia, and hypoglycemia.

Tabulated list of adverse reactions

The following adverse drug reactions, listed in Table 1, have been accumulated from clinical studies with octreotide:

Adverse drug reactions (Table 1) are ranked under heading of frequency, the most frequent first, using the following convention: very common (≥1/10); common (≥1/100, <1/10); uncommon (≥1/1,000, <1/100); rare (≥1/10,000, <1/1,000); very rare (<1/10,000), including isolated reports. Within each frequency grouping, adverse reactions are ranked in order of decreasing seriousness.
### SANDOSTATIN® LAR® IMPORTANT SAFETY INFORMATION (cont)

#### Table 1 Adverse drug reactions reported in clinical studies

<table>
<thead>
<tr>
<th>Gastrointestinal disorders</th>
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</thead>
<tbody>
<tr>
<td>Very common:</td>
<td>Diarrhea, abdominal pain, nausea, constipation, flatulence.</td>
<td></td>
</tr>
<tr>
<td>Common:</td>
<td>Dyspepsia, vomiting, abdominal bloating, steatorrhea, loose stools, discoloration of feces.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Nervous system disorders</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Very common:</td>
<td>Headache.</td>
<td></td>
</tr>
<tr>
<td>Common:</td>
<td>Dizziness.</td>
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<table>
<thead>
<tr>
<th>Endocrine disorders</th>
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<tbody>
<tr>
<td>Common:</td>
<td>Hypothyroidism, thyroid dysfunction (e.g., decreased TSH, decreased total T4, and decreased free T4).</td>
<td></td>
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<table>
<thead>
<tr>
<th>Hepatobiliary disorders</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Very common:</td>
<td>Cholelithiasis.</td>
<td></td>
</tr>
<tr>
<td>Common:</td>
<td>Cholecystitis, biliary sludge, hyperbilirubinemia.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Metabolism and nutrition disorders</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Very common:</td>
<td>Hyperglycemia.</td>
<td></td>
</tr>
<tr>
<td>Common:</td>
<td>Hypoglycemia, impaired glucose tolerance, anorexia.</td>
<td></td>
</tr>
<tr>
<td>Uncommon:</td>
<td>Dehydration.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>General disorders and administration site conditions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very common:</td>
<td>Injection site reactions.</td>
<td></td>
</tr>
<tr>
<td>Common:</td>
<td>Asthenia.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Investigations</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Common:</td>
<td>Elevated transaminase levels.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin and subcutaneous tissue disorders</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Common:</td>
<td>Pruritus, rash, alopecia.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Respiratory disorders</th>
<th></th>
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<tbody>
<tr>
<td>Common:</td>
<td>Dyspnea.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Cardiac disorders</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Common:</td>
<td>Bradycardia.</td>
<td></td>
</tr>
<tr>
<td>Uncommon:</td>
<td>Tachycardia.</td>
<td></td>
</tr>
</tbody>
</table>
Table 2 Adverse drug reactions derived from spontaneous reports

Post-marketing

Spontaneously reported adverse reactions, presented in Table 2, are reported voluntarily and it is not always possible to reliably establish frequency or a causal relationship to drug exposure.

<table>
<thead>
<tr>
<th>Immune system disorders</th>
<th>Anaphylaxis, allergy/hypersensitivity reactions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin and subcutaneous tissue disorders</td>
<td>Urticaria.</td>
</tr>
<tr>
<td>Hepatobiliary disorders</td>
<td>Acute pancreatitis, acute hepatitis without cholestasis, cholestatic hepatitis, cholestasis, jaundice, cholestatic jaundice.</td>
</tr>
<tr>
<td>Cardiac disorders</td>
<td>Arrhythmias.</td>
</tr>
<tr>
<td>Investigations</td>
<td>Increased alkaline phosphatase levels, increased gamma glutamyl transferase levels.</td>
</tr>
</tbody>
</table>

Description of selected adverse reactions

Gastrointestinal disorders

In rare instances, gastrointestinal side effects may resemble acute intestinal obstruction, with progressive abdominal distension, severe epigastric pain, abdominal tenderness and guarding.

The frequency of gastrointestinal adverse events is known to decrease over time with continued treatment.

Injection site reactions

Injection site related reactions including pain, burning, redness, hematoma, hemorrhage, pruritus or swelling were commonly reported in patients receiving Sandostatin® LAR®; however, these events did not require any clinical intervention in the majority of the cases.

Metabolism and nutrition disorders

Although measured fecal fat excretion may increase, there is no evidence to date that long-term treatment with octreotide has led to nutritional deficiency due to malabsorption.

Pancreatic enzymes

In very rare instances, acute pancreatitis has been reported within the first hours or days of Sandostatin® s.c. treatment and resolved on withdrawal of the drug. In addition, cholelithiasis induced pancreatitis has been reported for patients on long term Sandostatin® s.c. treatment.
Cardiac disorders
In both acromegalic and carcinoid syndrome patients, ECG changes were observed such as QT prolongation, axis shifts, early repolarization, low voltage, R/S transition, early R wave progression, and nonspecific ST-T wave changes. The relationship of these events to octreotide acetate is not established because many of these patients have underlying cardiac diseases (see Special warnings and precautions).

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorization of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system.

Overdose
A limited number of accidental overdoses of Sandostatin® LAR® have been reported. The doses ranged from 100 mg to 163 mg/month of Sandostatin® LAR®. The only adverse event reported was hot flushes. Cancer patients receiving doses of Sandostatin® LAR® up to 60 mg/month and up to 90 mg/2 weeks have been reported. These doses were in general well tolerated; however, the following adverse events have been reported: frequent urination, fatigue, depression, anxiety, and lack of concentration.

The management of overdosage is symptomatic.

List of excipients

Vial
Poly (DL-lactide-co-glycolide) 78.35% of nominal ll weight; sterile mannitol 17.0% of nominal fill weight.

Prefilled syringe

Kit without vial adapter/safety needle
One prefilled syringe (solvent for parenteral use), containing: sodium carboxymethylcellulose 12.5 mg, mannitol 15 mg; water for injection qs ad 2.5 mL.

Kit with vial adapter/safety needle
One prefilled syringe (solvent for parenteral use), containing: sodium carboxymethylcellulose (14 mg), mannitol (12 mg), poloxamer 188 (4 mg); water for injection qs ad 2 mL.

Pharmaceutical formulations may vary between countries.

Please see the Summary of Product Characteristics.