

**Optune Lua™**—For unresectable, locally advanced or metastatic, **MALIGNANT PLEURAL MESOTHELIOMA (MPM)**<sup>1</sup>

# ENTER AN EXCITING ERA IN SURVIVAL

Discover the first  
FDA-approved treatment  
for MPM in over 15 years<sup>2-4</sup>



## Indications For Use

Optune Lua™ is indicated for the treatment of adult patients with unresectable, locally advanced or metastatic, malignant pleural mesothelioma (MPM) to be used concurrently with pemetrexed and platinum-based chemotherapy.

## Selected Important Safety Information

### Contraindications

Do not use Optune Lua in patients with implantable electronic medical devices such as pacemakers or implantable automatic defibrillators, etc. Use of Optune Lua together with implanted electronic devices has not been tested and may lead to malfunctioning of the implanted device.

Do not use Optune Lua in patients known to be sensitive to conductive hydrogels. Skin contact with the gel used with Optune Lua may commonly cause increased redness and itching, and may rarely lead to severe allergic reactions such as shock and respiratory failure.

**Please see the complete Important Safety Information for Optune Lua on inside back page and the Optune Lua Instructions for Use (IFU) for complete information regarding the device's indications, contraindications, warnings, and precautions at [OptuneLua.com/hcp](http://OptuneLua.com/hcp).**

Caution: Federal law restricts this device to sale by or on the order of a physician. Humanitarian Device. Authorized by Federal Law for use in the treatment of adult patients with unresectable, locally advanced or metastatic, malignant pleural mesothelioma concurrently with pemetrexed and platinum-based chemotherapy. The effectiveness of this device for this use has not been demonstrated.

 **OPTUNE**  
LUA™

# Optune Lua™ is a wearable and portable treatment for MPM<sup>1,5</sup>

Introducing the second generation device—  
smaller, lighter, and designed to better fit your patient's everyday life

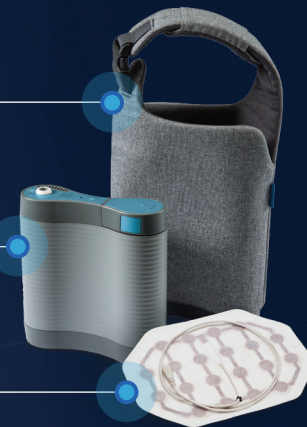


Weighs half as much now,  
at just 2.7 pounds.

Easy access  
sleeve bag

Electric field  
generator  
and battery

Transducer  
arrays



Loco-regional delivery of Tumor Treating Fields (TTFields) via transducer arrays provides antimitotic activity directly at the site of the malignancy<sup>1</sup>



- TTFields are added to pemetrexed + cisplatin or carboplatin systemic therapies
- The size and placement of transducer arrays are customized based on gender, body type, and tumor location
- It is recommended that Optune Lua is turned on at least 75% of the time (18 hours per day)<sup>1</sup>
  - Patients have flexibility to decide which times of the day are best for them, including at night when sleeping<sup>5</sup>

Novocure® will provide a customized map for array placement based on patient-specific measurements and tumor location (determined via CT scans).  
MPM, malignant pleural mesothelioma.

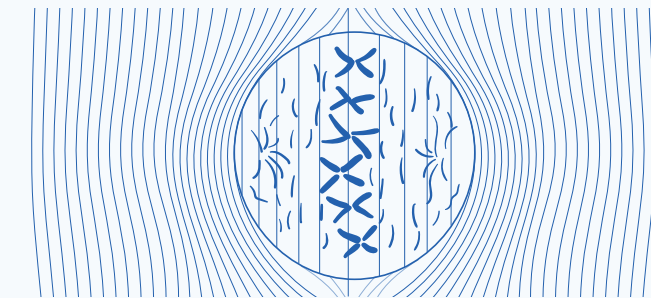
# Optune Lua is a noninvasive, antimitotic cancer treatment for MPM<sup>1</sup>

## Optune Lua delivers TTFields

- TTFields are low-intensity (1-3 V/cm) alternating electric fields tuned to a specific frequency (150 kHz) to disrupt MPM cancer cell division
  - TTFields disrupt cell division through physical interaction with key molecules during multiple phases of mitosis<sup>1,7</sup>

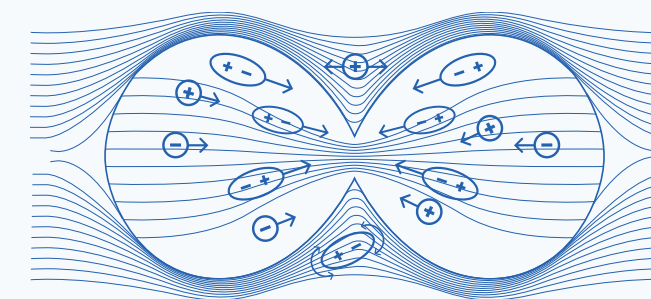
## TTFields target dividing cells, leading to apoptosis<sup>1,7</sup>

### Metaphase – Uniform electric fields (TTFields)



- Disrupt alignment of highly polarized tubulin subunits<sup>7</sup>
- Disrupt microtubule spindle formation during mitosis and may ultimately lead to apoptosis<sup>7,8</sup>

### Telophase – Nonuniform electric fields



- A change in cell shape during telophase causes a nonuniform electric field<sup>7,9</sup>
- Polar components move towards cleavage furrow<sup>7</sup>
- Cell cannot divide properly, which may ultimately lead to apoptosis<sup>7,8</sup>

MPM, malignant pleural mesothelioma; TTFields, Tumor Treating Fields.

## Selected Important Safety Information

### Warnings and Precautions

Optune Lua can only be prescribed by a healthcare provider that has completed the required certification training provided by Novocure®.

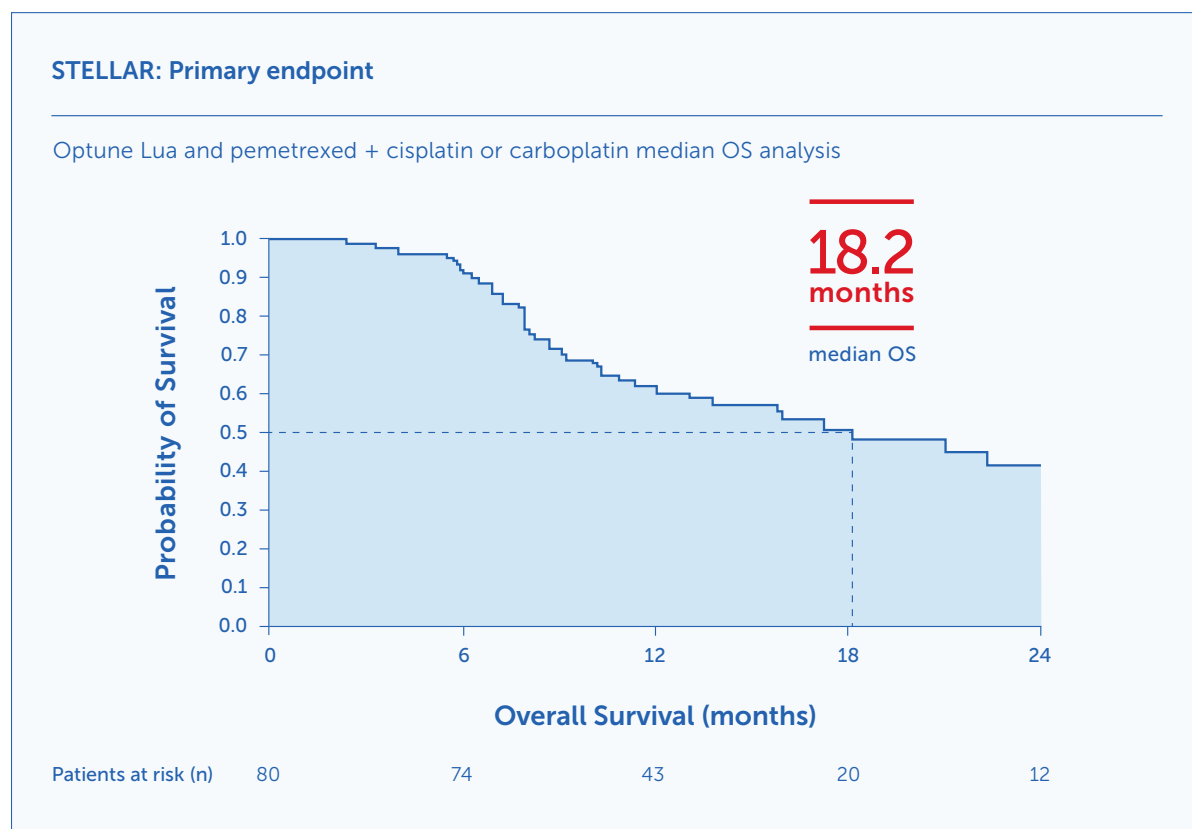
The most common (≥10%) adverse events involving Optune Lua in combination with chemotherapy were anemia, constipation, nausea, asthenia, chest pain, fatigue, medical device site reaction, pruritus, and cough.



Optune Lua allows patients to go about their daily routine while continuously receiving treatment for MPM<sup>6</sup>

# An exciting era in overall survival (OS) starts with Optune Lua™

STELLAR Clinical Results: Patients who used Optune Lua as first line in combination with pemetrexed + cisplatin or carboplatin achieved 18.2 months median OS with no added systemic AEs<sup>1,6</sup>



(95% CI, 12.1-25.8) Kaplan Meier overall survival curve for the 80 study patients.

## Study design

The STELLAR study was a prospective, single-arm, phase 2 trial to study the safety and efficacy of Optune Lua first line in patients with unresectable, locally advanced or metastatic, MPM. Patients were ≥18 years of age, had an ECOG performance status of 0-1, and at least 1 measurable or evaluable lesion according to mRECIST for mesothelioma. Patients received continuous TTFIELDS at a frequency of 150 kHz to the thorax and concomitant chemotherapy every 21 days for up to 6 cycles.

AEs, adverse events; ECOG, Eastern Cooperative Oncology Group; MPM, malignant pleural mesothelioma; mRECIST, modified Response Evaluation Criteria In Solid Tumors; TTFIELDS, Tumor Treating Fields.

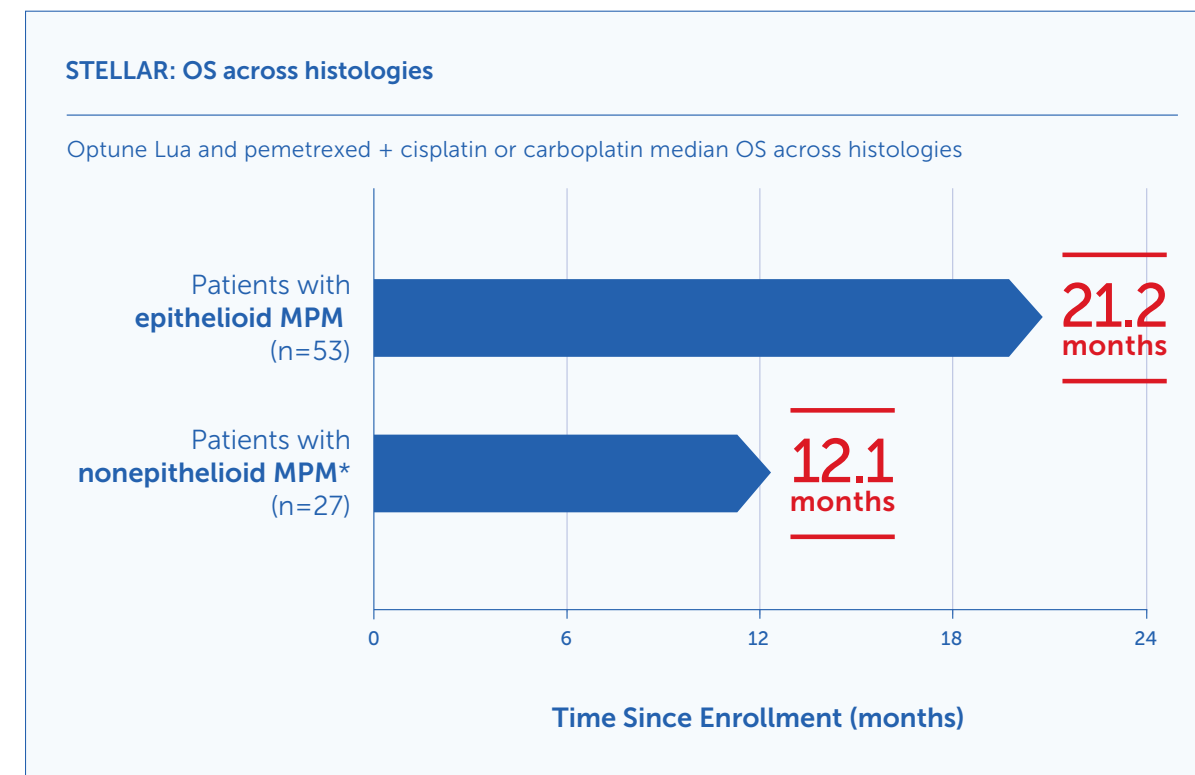
## Selected Important Safety Information

Other potential adverse effects associated with the use of Optune Lua include: treatment related skin toxicity, allergic reaction to the plaster or to the gel, electrode overheating leading to pain and/or local skin burns, infections at sites of electrode contact with the skin, local warmth and tingling sensation beneath the electrodes, muscle twitching, medical device site reaction and skin breakdown/skin ulcer.

# Median OS across MPM histologies

Optune Lua and pemetrexed + cisplatin or carboplatin median OS results shown across histologies<sup>1,6</sup>

- 21.2 months median OS in 66% of patients with epithelioid histology (2/3 of participants) and 12.1 months in 34% of less responsive, harder to treat nonepithelioid histology (1/3 of patients)\*



\*Nonepithelioid histology includes sarcomatoid or biphasic and unknown tumor pathology.

## Baseline patient characteristics

The STELLAR study included male (84%) and female (16%) patients with a median age of 67 years who had locally advanced (84%) and metastatic (16%) tumor stage. Tumor histology included epithelioid (66%), sarcomatoid or biphasic (26%), and unknown (8%). ECOG performance status for all patients was 0 (56%) or 1 (44%).

ECOG, Eastern Cooperative Oncology Group; MPM, malignant pleural mesothelioma; OS, overall survival.

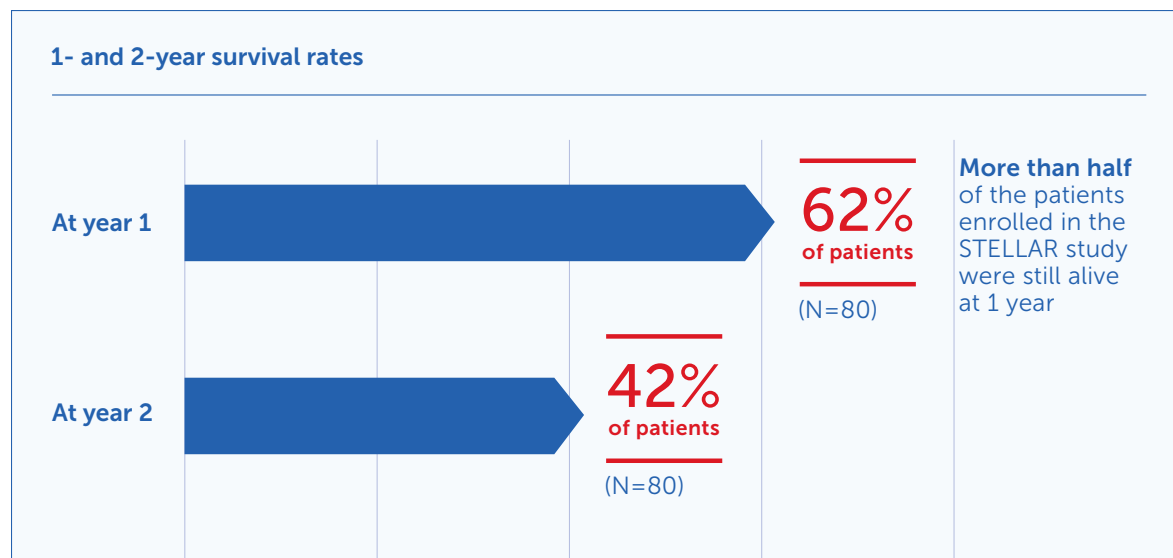
# STELLAR: Secondary endpoints

## Progression-free survival (PFS)<sup>1</sup>

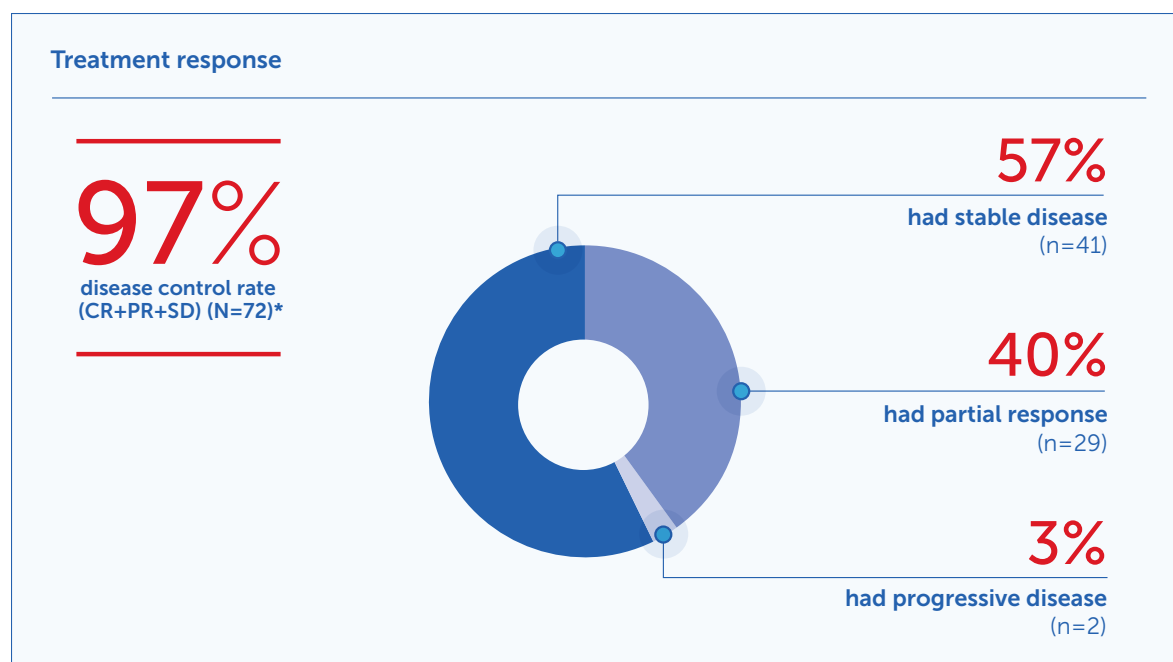
Patients using Optune Lua™ achieved 7.6 months median PFS when combined with pemetrexed + cisplatin or carboplatin as first-line treatment (N=80).

- 95% CI, 6.7-8.6, across all patients treated

## Survival rates<sup>1,6</sup>



## Radiological response rate<sup>1,6</sup>



\*In patients with at least one follow-up CT scan performed and were evaluable for response according to mRECIST criteria.

# No systemic AEs were considered to be related to the use of Optune Lua

Mild-to-moderate skin irritation was the only device-related side effect with Optune Lua<sup>1,6</sup>

**Severe (Grade 3-4) AEs by body system seen in >1 patient:**

System organ class/ preferred term	Optune Lua and pemetrexed + cisplatin or carboplatin (N=80)	System organ class/ preferred term	Optune Lua and pemetrexed + cisplatin or carboplatin (N=80)
<b>Number of patients with ≥1 AE</b>	<b>32 (40%)</b>	<b>General disorders and administration site conditions</b>	<b>6 (8%)</b>
<b>Blood and lymphatic system disorders</b>	<b>18 (23%)</b>	Fatigue	3 (4%)
Anemia	9 (11%)	<b>Infections and infestations</b>	<b>2 (3%)</b>
Leukopenia	3 (4%)	<b>Investigations</b>	<b>2 (3%)</b>
Neutropenia	7 (9%)	<b>Respiratory, thoracic, and mediastinal disorders</b>	<b>4 (5%)</b>
Thrombocytopenia	4 (5%)	Dyspnea	2 (3%)
<b>Cardiac disorders</b>	<b>3 (4%)</b>	<b>Skin and subcutaneous tissue disorders</b>	<b>4 (5%)</b>
Pericardial effusion	2 (3%)	Medical device site reaction (rash beneath transducer arrays)	4 (5%)
<b>Gastrointestinal disorders</b>	<b>3 (4%)</b>		
Vomiting	2 (3%)		

- The only AE attributed to Optune Lua use was skin irritation (71% of patients); 66% mild-to-moderate and 5% severe<sup>1,6</sup>
- No SAEs were considered related to device use

AEs, adverse events; SAEs, serious adverse events.

## Selected Important Safety Information

If the patient has an underlying serious skin condition on the chest, evaluate whether this may prevent or temporarily interfere with Optune Lua treatment.

Do not prescribe Optune Lua for patients that are pregnant, you think might be pregnant or are trying to get pregnant, as the safety and effectiveness of Optune Lua in these populations have not been established.



# Optune Lua™ has the same mechanism of action as Optune®<sup>1,10,11</sup>

Optune, which has been approved for glioblastoma multiforme (GBM) since 2011, offers real-world experience and clinical evidence delivering Tumor Treating Fields (TTFields) in patients with both recurrent and newly diagnosed GBM<sup>12</sup>



MORE THAN **15,000 PATIENTS** HAVE BEEN TREATED WITH TTFIELDS IN GBM SINCE THE FDA APPROVAL OF OPTUNE IN 2011<sup>10,13</sup>

In newly diagnosed patients with GBM, the addition of Optune + maintenance temozolomide (TMZ) **significantly improved PFS and OS with QoL maintained over time**<sup>12,14,\*†</sup>

In recurrent GBM, patients treated with Optune experienced **similar efficacy, improved cognitive and emotional functioning, and fewer systemic AEs** compared with physician's choice of chemotherapy<sup>11,15,‡</sup>

- Optune was approved under the Premarket Authorization (PMA) pathway<sup>16</sup>

**Optune Lua for MPM is FDA approved under the Humanitarian Device Exemption (HDE) pathway and is classified as an Humanitarian Use Device (HUD)**<sup>1,6</sup>

- An HDE may be granted if:
  - The device will not expose patients to an unresectable or significant risk of illness or injury, and the probable benefit to health from use of the device outweighs the risk of injury or illness from its use while taking into account the probable risks and benefits of currently available devices or alternative forms of treatment<sup>17</sup>
  - The device would not be available to a person with the disease or condition in question without the HDE<sup>17</sup>
  - The device is designed to treat or diagnose a disease or condition that affects not more than 8,000 individuals in the United States<sup>17</sup>

\*Patient-reported QoL data collected per EORTC QLQ-C30 at baseline and Months 3, 6, 9, and 12. The 30-question survey covered 5 daily-functioning domains (physical, role, social, emotional, and cognitive).<sup>12,14</sup>

†EF-14 was a prospective, randomized, open-label, phase 3 clinical trial that was designed to evaluate the efficacy and safety of TTFields + TMZ vs maintenance TMZ in patients newly diagnosed with supratentorial GBM who completed radiation therapy and adjuvant TMZ. Patients (N=695) were randomized in a 2 to 1 ratio to receive either TTFields + TMZ or TMZ alone. Treatment began 4 to 7 weeks after the end of chemotherapy and radiation therapy. The specific objectives of the study included: PFS (primary endpoint), overall survival (powered secondary endpoint), 1- and 2-year survival rate, overall response rate, QoL, and safety.<sup>11</sup>

‡EF-11 was a prospective, randomized, open-label, phase 3 clinical trial that was designed to evaluate the efficacy and safety of TTFields as a monotherapy vs physician's best choice for chemotherapy (including bevacizumab) in patients with supratentorial recurrent GBM. The best available therapy was prescribed according to local practice and depending on prior treatment exposure. Adult patients (N=237) were randomized in a 1:1 manner to either TTFields or chemotherapy. The primary endpoint was OS. Secondary objectives included: PFS, 1-year survival rate, radiological response rate, QoL, and safety.<sup>11</sup>

AEs, adverse events; EORTC QLQ-C30, European Organisation for Research and Treatment of Cancer core quality of life questionnaire; OS, overall survival; PFS, progression-free survival; QoL, quality of life.

## Selected Important Safety Information

### Contraindications

Do not use Optune Lua in patients known to be sensitive to conductive hydrogels. Skin contact with the gel used with Optune Lua may commonly cause increased redness and itching, and may rarely lead to severe allergic reactions such as shock and respiratory failure.

# nCompass™ is an award-winning\* support program with comprehensive services



For patients using Optune Lua, nCompass partners with your patients and your practice every step of the treatment journey—offering customized support based on patient and caregiver needs

## Reimbursement assistance

- Support your patients and your practice through the reimbursement process, starting with an investigation of benefits<sup>†</sup>

## Support includes



In-person device education



Resources and tips for using Optune Lua



24/7 technical support



Reordering supplies



Travel support



Call us:  
**1-855-281-9301** (toll-free)



Or email:  
**support@novocure.com**

\*Eyeforpharma 2018 North American Winner, Most valuable patient initiative or service.

†Out-of-pocket cost for treatment will be determined based on the patient's household income and insurance plan. Novocure® is committed to identifying resources and programs to minimize the cost of Optune Lua for patients who are uninsured, underinsured, or have a household income of <\$150,000.



# Important Safety Information

## Indications For Use

Optune Lua™ is indicated for the treatment of adult patients with unresectable, locally advanced or metastatic, malignant pleural mesothelioma (MPM) to be used concurrently with pemetrexed and platinum-based chemotherapy.

Optune® is intended as a treatment for adult patients (22 years of age or older) with histologically-confirmed glioblastoma multiforme (GBM).

Optune with temozolomide is indicated for the treatment of adult patients with newly diagnosed, supratentorial glioblastoma following maximal debulking surgery, and completion of radiation therapy together with concomitant standard of care chemotherapy.

## Important Safety Information

### Contraindications

Do not use Optune Lua in patients with MPM with implantable electronic medical devices such as pacemakers or implantable automatic defibrillators, etc. Do not use Optune in patients with GBM with an implanted medical device, a skull defect (such as, missing bone with no replacement), or bullet fragments. Use of Optune together with skull defects or bullet fragments has not been tested and may possibly lead to tissue damage or render Optune ineffective.

Use of Optune Lua for MPM or Optune for GBM together with implanted electronic devices has not been tested and may lead to malfunctioning of the implanted device.

Do not use Optune Lua for MPM or Optune for GBM in patients known to be sensitive to conductive hydrogels. Skin contact with the gel used with Optune Lua and Optune may commonly cause increased redness and itching, and may rarely lead to severe allergic reactions such as shock and respiratory failure.

### Warnings and Precautions

Optune Lua and Optune can only be prescribed by a healthcare provider that has completed the required certification training provided by Novocure®.

The most common (≥10%) adverse events involving Optune Lua in combination with chemotherapy in patients with MPM were anemia, constipation, nausea, asthenia, chest pain, fatigue, medical device site reaction, pruritus, and cough.

Other potential adverse effects associated with the use of Optune Lua include: treatment related skin toxicity, allergic reaction to the plaster or to the gel, electrode overheating leading to pain and/or local skin burns, infections at sites of electrode contact with the skin, local warmth and tingling sensation beneath the electrodes, muscle twitching, medical device site reaction and skin breakdown/skin ulcer.

The most common (≥10%) adverse events involving Optune in combination with chemotherapy in patients with GBM were thrombocytopenia, nausea, constipation, vomiting, fatigue, medical device site reaction, headache, convulsions, and depression.

If the patient has an underlying serious skin condition on the treated area, evaluate whether this may prevent or temporarily interfere with Optune Lua and Optune treatment.

Do not prescribe Optune Lua or Optune for patients that are pregnant, you think might be pregnant or are trying to get pregnant, as the safety and effectiveness of Optune Lua and Optune in these populations have not been established.

# References

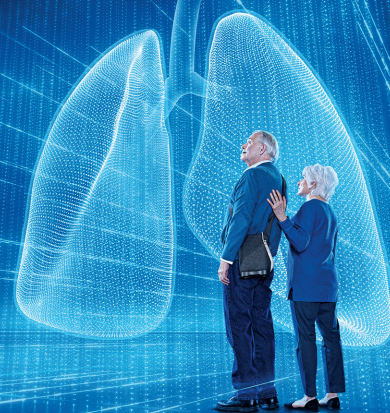
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# ENTER AN EXCITING ERA OF SURVIVAL



**Optune Lua** in combination with pemetrexed + cisplatin or carboplatin showed encouraging overall survival (OS) results in the STELLAR clinical study with no added systemic AEs<sup>1,2</sup>

[OptuneLua.com/hcp](http://OptuneLua.com/hcp)

## Median OS

### 18.2 months

Median OS with no added chemotherapy-related side effects was achieved in patients using Optune Lua in first-line combination with pemetrexed + cisplatin or carboplatin<sup>1,2</sup>

## Median OS shown across histologies

### 21.2 months

in 66% of patients with **epithelioid** histology (n=53)<sup>1</sup>

### 12.1 months

in 34% of patients with **nonepithelioid** histology (n=27)<sup>1</sup>

## No added systemic AEs

No added systemic AEs were considered to be related to the use of Optune Lua.<sup>1</sup>

- The only AE attributed to Optune Lua use was skin irritation (71% of patients); 66% mild-to-moderate and 5% severe<sup>1,2</sup>
- No SAEs were considered related to device use<sup>1,2</sup>

## nCompass™



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AEs, adverse events; SAEs, serious adverse events.

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