forward-looking statements

This presentation contains certain forward-looking statements with respect to the business of Novocure and certain of its plans and objectives, including with respect to the development and commercialization of its lead product candidate, Optune, for a number of oncology indications. These forward-looking statements can be identified in this presentation by the fact that they do not relate only to historical or current facts. Forward-looking statements often use words "expect", "intend", "anticipate", "plan", "may", "should", "would", "could" or other words of similar meaning. These statements are based on assumptions and assessments made by Novocure in light of industry experience and perception of historical trends, current conditions, expected future developments and other appropriate factors. By their nature, forward-looking statements involve risk and uncertainty, and Novocure's performance and financial results could differ materially from those expressed or implied in these forward-looking statements due to general financial, economic, regulatory and political conditions as well as more specific risks and uncertainties facing Novocure such as those set forth in its Annual Report on Form 10-K filed on February 28, 2019, or in subsequent quarterly filings with the U.S. Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this presentation. Novocure assumes no obligation to update or correct the information contained in this presentation, whether as a result of new information, future events or otherwise, except to the extent legally required.

The statements contained in this presentation are made as at the date of this presentation, unless some other time is specified in relation to them, and service of this presentation shall not give rise to any implication that there has been no change in the facts set out in this presentation since such date. Nothing contained in this presentation shall be deemed to be a forecast, projection or estimate of the future financial performance of Novocure, except where expressly stated.

As of the date of this presentation, Optune is only FDA-approved for the treatment of adults with supratentorial glioblastoma, or GBM, and its approval for other indications is not certain. Novocure can provide no assurances regarding market acceptance of Optune or its successful commercialization, and can provide no assurances regarding the company’s results of operations or financial condition in the future. This presentation is for informational purposes only and may not be relied upon in connection with the purchase or sale of any security.
a global oncology company with a proprietary platform

3
FDA-APPROVED INDICATIONS

4
INDICATIONS IN LATE-STAGE PIPELINE

140+
ISSUED PATENTS GLOBALLY

$269M
TRAILING 12 MONTHS NET REVENUES

41%
REVENUE GROWTH Q1 2019 VS. Q1 2018

$257M
CASH ON HAND AS OF MARCH 31, 2019
key messages from the first quarter

<table>
<thead>
<tr>
<th>Q1 2019 ACCOMPLISHMENTS</th>
<th>ANTIMIPATED 2019 CATALYSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• More than 2,600 active patients on Optune as of March 31, 2019</td>
<td>• HDE approval for malignant pleural mesothelioma from FDA</td>
</tr>
<tr>
<td>• $73.3 million in net revenues, 41% growth versus q1 2018</td>
<td>• CMS decision regarding coverage request for newly diagnosed GBM</td>
</tr>
<tr>
<td>• INNOVATE-3 open and enrolling, our fourth ongoing phase 3 pivotal trial</td>
<td>• Potential launch of Optune in China</td>
</tr>
<tr>
<td></td>
<td>• Positive cash flow from operations</td>
</tr>
</tbody>
</table>
we can leverage physics to fight cancer

AN ELECTRIC FIELD EXERTS FORCES ON CHARGED OBJECTS

TUMOR TREATING FIELDS USES ELECTRIC FIELDS TO DISRUPT CELL DIVISION

MISALIGNED TUBULINS INTERFERE WITH FORMATION OF MITOTIC SPINDLE

TUMOR TREATING FIELDS DESCRIBES ELECTRIC FIELDS THAT ALTERNATE 100,000 TO 300,000 TIMES PER SECOND TO TARGET CANCER CELLS

ALTERNATING ELECTRIC FIELDS DISRUPT CANCER CELL DIVISION

CANCER CELL DEATH
mitotic spindle disruption has been observed in every cancer cell line tested

CONTROL

TUMOR TREATING FIELDS

Blue staining is DAPI, highlighting DNA. Red staining is for PH3, highlighting DNA binding proteins. Green staining is for tubulin, highlighting the mitotic spindle. Novocure data on file.
the Optune® delivery system for GBM

**TRANSDUCER ARRAYS**
Sterile, single-use transducer arrays replaced at least two times per week

**ELECTRIC FIELD GENERATOR**
Wearable and portable field generator weighing 2.7 pounds
proven to provide long-term quality survival to patients with newly diagnosed GBM

The updated NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Central Nervous System Cancers now include alternating electric field therapy (Optune) in combination with temozolomide (TMZ) following maximal safe resection and standard brain radiation therapy with concurrent TMZ as Category 1 recommended treatment option for patients with newly diagnosed supratentorial glioblastoma (GBM) and good performance status.*

There is uniform NCCN consensus for this recommendation based on high-level evidence (Category 1).

GBM, glioblastoma; TMZ, temozolomide; OS, overall survival; ITT, intent-to-treat
more time on Optune predicted increased significant survival benefit in GBM

86% of patients received a survival benefit from Optune because they used it more than half the time (n=388/450)

**Median OS by percentage of monthly time on Optune**

- **Optune + TMZ**
  - 90%-100% (n=43) 22-24 hours/day: 25 months, P<0.05
  - 70%-90% (n=257) 17-22 hours/day: 22 months, P<0.05
  - 60%-70% (n=46) 14-17 hours/day: 20 months, P<0.05
  - 50%-60% (n=42) 12-14 hours/day: 18 months, P<0.05
  - 0% (n=229) TMZ alone: 16 months

**TMZ, temozolomide**

* Based on amount of time Optune was turned on and providing therapy over the course of a month. This data reflects the average patient usage of Optune for the first 6 months of treatment (months 1-6). Approximation, based on monthly usage.

‡vs TMZ alone.

higher field intensity at the tumor bed predicted survival benefit

overall survival in GBM by field intensity delivered

- Higher intensities*: 25 months, n=110, p=0.01
- Lower intensities*: 21 months, n=207
- TMZ alone: 16 months, n=229

(TMZ, temozolomide; CI, confidence interval)

* Higher intensities defined as field strengths greater than or equal to 1.0 V/cm. Lower intensities defined as field strengths less than 1.0 V/cm.
1 95% CI 22-37; 67 events, 43 censored
2 95% CI 19-24; 162 events, 45 censored

Post-hoc analysis of EF-14 treatment arm patient data. Of the 466 EF-14 treatment arm patients, the analysis reviewed 317 patients with treatment duration >2 months and sufficient MRI quality.


dose = time on therapy x intensity

overall survival in newly diagnosed GBM by dose

higher intensities* and 20-24 hours/day
higher intensities* and 18-20 hours/day
higher intensities* and <18 hours/day
lower intensities*
TMZ alone

median overall survival, months

37 months, n=361
25 months, n=442
23 months, n=423
21 months, n=195
16 months, n=229

TMZ, temozolomide; CI, confidence interval.
*Higher intensities defined as field strengths greater than or equal to 1.0 V/cm. Lower intensities defined as field strengths less than 1.0 V/cm.

1 95% CI 21-48; 23 events, 13 censored
2 95% CI 18-39; 29 events, 15 censored
3 95% CI 19-44; 24 events, 18 censored
4 95% CI 17-24; 153 events, 42 censored

Post-hoc analysis of EF-14 treatment arm patient data. Of the 466 EF-14 treatment arm patients, the analysis reviewed 317 patients with treatment duration >2 months and sufficient MRI quality.


first FDA-approved mesothelioma treatment in more than 15 years

**Primary endpoint**

*Median OS*

(95% CI 12.1-25.8) across all patients treated with NovoTTF-100L and pemetrexed + cisplatin/carboplatin

**Secondary endpoint**

*Median PFS*

(95% CI 6.7-8.6) across all patients treated with NovoTTF-100L and pemetrexed + cisplatin/carboplatin

**Median OS across histologies**

- Patients with epithelioid MPM (n=53) → 21.2 months
- Patients with non-epithelioid MPM (n=27) → 12.1 months

**Survival rate**

- AT YEAR 1: 62% of patients (N=80)
- AT YEAR 2: 42% of patients (N=80)

More than half of the patients enrolled in the STELLAR trial were still alive at 1 year

The NovoTTF-100L System was approved by FDA under the Humanitarian Device Exemption (HDE) pathway in May 2019.

Caution: Federal law restricts the NovoTTF-100L System 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.
established international presence

UNITED STATES
1,778 active patients at period end

EMEA
735 active patients at period end

JAPAN
118 active patients at period end

CHINA
License agreement September 2018

Information above as of March 31, 2019.
continued growth in newly diagnosed GBM
record quarterly revenue of $73.3 million

global net revenues (USD in thousands)

>2,600
ACTIVE PATIENTS
AS OF MARCH 31, 2019

41%
REVENUE GROWTH
Q1 2019 VS. Q1 2018

$82,888
FY 2016

$177,026
FY 2017

$248,069
FY 2018

© Novocure 2019 15
pipeline in a product with single mechanism of action

<table>
<thead>
<tr>
<th>CANCERS OF THE CENTRAL NERVOUS SYSTEM</th>
<th>CANCERS OF THE CHEST</th>
<th>CANCERS OF THE ABDOMEN</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glioblastoma</td>
<td>Brain metastases</td>
<td>Ependymoma</td>
<td>Gliosarcoma</td>
</tr>
<tr>
<td>Mesothelioma</td>
<td>Non-small cell lung cancer</td>
<td>Small cell lung cancer</td>
<td>Ovarian cancer</td>
</tr>
<tr>
<td>PRE-CLINICAL EVIDENCE</td>
<td>FIRST IN HUMAN EVIDENCE</td>
<td>CLINICAL EVIDENCE</td>
<td>FDA APPROVAL</td>
</tr>
</tbody>
</table>
with drumbeat of clinical and regulatory milestones
GBM and MPM represent tip of the iceberg

potential to significantly expand total addressable market

5,000 cases diagnosed annually in the U.S.

- Glioblastoma (GBM)
- Mesothelioma (MPM)
- Brain metastases from non-small cell lung cancer
- Non-small cell lung cancer
- Pancreatic cancer
- Ovarian cancer
Cash flow from glioblastoma is funding increased investments in research and development.

<table>
<thead>
<tr>
<th>U.S. DOLLARS IN THOUSANDS</th>
<th>Q1 2019</th>
<th>Q1 2018</th>
<th>% GROWTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net revenues</td>
<td>$73,309</td>
<td>$52,125</td>
<td>41%</td>
</tr>
<tr>
<td>Cost of revenues</td>
<td>19,814</td>
<td>18,238</td>
<td>9%</td>
</tr>
<tr>
<td>Gross profit</td>
<td>53,495</td>
<td>33,887</td>
<td>58%</td>
</tr>
<tr>
<td>Research, development and clinical trials</td>
<td>17,042</td>
<td>11,104</td>
<td>53%</td>
</tr>
<tr>
<td>Sales and marketing</td>
<td>22,333</td>
<td>18,135</td>
<td>23%</td>
</tr>
<tr>
<td>General and administrative</td>
<td>20,238</td>
<td>17,325</td>
<td>17%</td>
</tr>
<tr>
<td>Total operating costs and expenses</td>
<td>59,613</td>
<td>46,564</td>
<td>28%</td>
</tr>
<tr>
<td>Operating income (loss)</td>
<td>(6,118)</td>
<td>(12,677)</td>
<td>52%</td>
</tr>
<tr>
<td>Financial expenses, net</td>
<td>2,371</td>
<td>4,853</td>
<td>-49%</td>
</tr>
<tr>
<td>Income (loss) before income taxes</td>
<td>(8,489)</td>
<td>(17,530)</td>
<td>52%</td>
</tr>
<tr>
<td>Income taxes</td>
<td>3,661</td>
<td>3,194</td>
<td>15%</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>$ (12,150)</td>
<td>$ (20,724)</td>
<td>41%</td>
</tr>
<tr>
<td>Net cash used in operating activities</td>
<td>$ (4,315)</td>
<td>$ (16,824)</td>
<td>-73%</td>
</tr>
</tbody>
</table>

73% Gross Margin Q1 2019

$257m Cash and Cash Equivalents and Short-Term Investments as of March 31, 2019

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robust intellectual property portfolio

INTELLECTUAL PROPERTY

- As of March 31, 2019 over 140 issued patents globally with expected expiration dates as late as 2037
- Numerous patents pending worldwide

LAYERED PATENT STRATEGY

- Hold fundamental IP for the use of alternating electric fields in oncology
- Platform technology, tools and multiple applications covered, including mechanism of action, use of alternating electric fields in combination with chemotherapy and delivery of alternating electric fields through transducer arrays
- Continue to file patent applications globally as we enhance our technology and applications

PMA APPROVAL PATHWAY

- TTFields is classified as class III, life-sustaining device requiring PMA or HDE approval
- Anticipate any competitor device would require clinical trials
Novocure is working to...

- **Drive** Optune adoption
- **Advance** our pipeline
- **Invest** in our people and culture
- **Create** shareholder value

... extend survival in some of the most aggressive forms of cancer
**INDICATIONS**

- 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.
- For the treatment of recurrent GBM, Optune is indicated following histologically- or radiologically-confirmed recurrence in the supratentorial region of the brain after receiving chemotherapy. The device is intended to be used as a monotherapy, and is intended as an alternative to standard medical therapy for GBM after surgical and radiation options have been exhausted.
- The NovoTTF-100L System is indicated for the treatment of adult patients with unresectable, locally advanced or metastatic, malignant mesothelioma (MPM) to be used concurrently with pemetrexed and platinum-based chemotherapy.

**CONTRAINDICATIONS**

- 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. Do not use the NovoTTF-100L System in patients with MPM with implantable electronic medical devices such as pacemakers or implantable automatic defibrillators, etc.
- Use of Optune for GBM or the NovoTTF-100L System for MPM together with implanted electronic devices has not been tested and may lead to malfunctioning of the implanted device.
- Do not use Optune for GBM or the NovoTTF-100L System for MPM in patients known to be sensitive to conductive hydrogels. Skin contact with the gel used with Optune and the NovoTTF-100L System may commonly cause increased redness and itching, and may rarely lead to severe allergic reactions such as shock and respiratory failure.
NovoTTF-100L™ System and Optune® indications for use and important safety information

WARNINGS AND PRECAUTIONS

- Optune and the NovoTTF-100L System 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 in combination with chemotherapy in patients with GBM were thrombocytopenia, nausea, constipation, vomiting, fatigue, convulsions, and depression.
- The most common (≥10%) adverse events related to Optune treatment alone in patients with GBM were medical device site reaction and headache. Other less common adverse reactions were malaise, muscle twitching, and falls related to carrying the device.
- The most common (≥10%) adverse events involving the NovoTTF-100L System in combination with chemotherapy in patients with MPM were anemia, constipation, nausea, asthenia, chest pain, fatigue, device skin reaction, pruritus, and cough.
- Other potential adverse effects associated with the use of the NovoTTF-100L System 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 site reaction and skin breakdown/skin ulcer.
- If the patient has an underlying serious skin condition on the treated area, evaluate whether this may prevent or temporarily interfere with Optune treatment and the NovoTTF-100L System.
- Do not prescribe Optune or the NovoTTF-100L System for patients that are pregnant, you think might be pregnant or are trying to get pregnant, as the safety and effectiveness of the NovoTTF-100L System and Optune in these populations have not been established.
- Please go to Optune.com to see the Optune Instructions For Use (IFU) for complete information regarding the device’s indications, contraindications, warnings, and precautions.

Please go to Optune.com to see the NovoTTF-100L IFU for complete information regarding the device’s indications, contraindications, warnings, and precautions.
clinical appendix
two additional randomized trials in GBM planned

1. Trial to study potential benefit of initiating Optune with radiation therapy
   - Intended to support possible label expansion

2. Trial to study potential efficacy signals when Optune is combined with multiple agents
   - Intended to identify optimal combination treatments

Current indication for newly diagnosed GBM:
- Maximal debulking surgery
- Completion of radiation therapy
- Optune with temozolomide
- Optune with radiation therapy
- Optune with temozolomide plus other therapies

Patientforward
Tumor Treating Fields is frequency-tuned to cell size to maximize effects on mitosis

**EFFECTS ON CELLS ARE FREQUENCY SPECIFIC AND INVERSELY RELATED TO CELL SIZE**

<table>
<thead>
<tr>
<th>Normal intestine</th>
<th>Pancreatic cancer</th>
<th>Non-small cell lung cancer</th>
<th>Ovarian cancer</th>
<th>Glioblastoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>~50 kHz</td>
<td>150 kHz</td>
<td>150 kHz</td>
<td>200 kHz</td>
<td>200 kHz</td>
</tr>
</tbody>
</table>
transducer array placement outside of the head

- abdominal array placement
- torso array placement
- pelvic array placement
ongoing METIS trial in brain metastases

A pivotal, open-label, randomized study of radiosurgery with or without Tumor Treating Fields (150 kHz) for 1-10 brain metastases from non-small cell lung cancer

- 270 patients randomized 1:1
- Tumor Treating Fields until second cerebral progression
- Primary endpoint – time to first intracranial progression
- Secondary endpoints include time to neurocognitive failure, overall survival, radiological response
completed pilot EF-15 trial in lung cancer

A pilot, non-randomized, open-label study of Tumor Treating Fields (150 kHz) concomitant with pemetrexed in pretreated patients with locally advanced non-small cell lung cancer

- 42 patients with comparison to historical controls
- Data published in *Lung Cancer* in September 2013

<table>
<thead>
<tr>
<th>EFFICACY ENDPOINTS</th>
<th>TTIELDS WITH PEMETREXED¹</th>
<th>PEMETREXED-ALONE HISTORICAL CONTROL²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median in-field PFS</td>
<td>6.5 months</td>
<td>n/a</td>
</tr>
<tr>
<td>Median PFS</td>
<td>5 months</td>
<td>2.9 months</td>
</tr>
<tr>
<td>Median OS</td>
<td>13.8 months</td>
<td>8.3 months</td>
</tr>
<tr>
<td>One-year survival rate</td>
<td>57%</td>
<td>30%</td>
</tr>
<tr>
<td>Partial response rate</td>
<td>15%</td>
<td>9%</td>
</tr>
</tbody>
</table>

ongoing LUNAR trial in non-small cell lung cancer

A pivotal, randomized, open-label study of Tumor Treating Fields (150 kHz) concurrent with standard of care therapies for treatment of stage 4 non-small cell lung cancer following platinum failure

- 540 patients randomized 1:1
- Primary endpoint – overall survival (OS)
- Secondary endpoints include:
  - OS of TTFields + docetaxel vs docetaxel alone
  - OS of TTFields + immune checkpoint inhibitors vs immune checkpoint inhibitors alone
  - OS of TTFields + docetaxel vs immune checkpoint inhibitors alone

completed pilot PANOVA trial in pancreatic cancer

A pilot, double arm, non-randomized, open-label study of Tumor Treating Fields (150 kHz) concomitant with gemcitabine and nab-paclitaxel for frontline treatment of pancreatic adenocarcinoma

- 40 patients (2 cohorts of 20 patients) with comparison to historical controls
- Data published in *Pancreatology* in October 2018

### Efficacy Endpoints for Second Cohort

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>TTFIELDS WITH NAB-PACLITAXEL + GEMCITABINE&lt;sup&gt;1&lt;/sup&gt;</th>
<th>NAB-PACLITAXEL + GEMCITABINE&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median PFS</td>
<td>12.7 months</td>
<td>5.5 months</td>
</tr>
<tr>
<td>Median OS</td>
<td>Not yet reached</td>
<td>8.5 months</td>
</tr>
<tr>
<td>One-year survival rate</td>
<td>72%</td>
<td>35%</td>
</tr>
<tr>
<td>Partial response rate (PR)</td>
<td>40%</td>
<td>23%</td>
</tr>
<tr>
<td>Clinical benefit (PR plus stable disease)</td>
<td>87%</td>
<td>50%</td>
</tr>
</tbody>
</table>


ongoing PANOVA-3 trial in pancreatic cancer

A pivotal, randomized open-label study of Tumor Treating Fields (150 kHz) concomitant with gemcitabine and nab-paclitaxel for front-line treatment of locally-advanced pancreatic adenocarcinoma

- 556 patients randomized 1:1
- Tumor Treating Fields until local disease progression in the abdomen
- Primary endpoint – overall survival (OS)
- Secondary endpoints include PFS, objective response rate, rate of resectability, quality of life


screening and baseline evaluation → randomization 1:1 → TTFields + nab-paclitaxel + gemcitabine → CT q8w until progression → second line chemotherapy → survival follow up

nab-paclitaxel + gemcitabine → CT q8w until progression → second line chemotherapy → survival follow up

nab-paclitaxel + gemcitabine → CT q8w until progression → second line chemotherapy → survival follow up
completed pilot INNOVATE trial in ovarian cancer

A pilot, non-randomized, open-label study of Tumor Treating Fields (200 kHz) concomitant with weekly paclitaxel in patients with recurrent ovarian cancer

- 30 patients with comparison to historical controls
- Data published in *Gynecologic Oncology* in July 2018

### Efficacy Endpoints

<table>
<thead>
<tr>
<th></th>
<th>TTFIELDS with Paclitaxel&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Paclitaxel Alone Historical Results&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median PFS</td>
<td>8.9 months</td>
<td>3.9&lt;sup&gt;††&lt;/sup&gt; months</td>
</tr>
<tr>
<td>Median OS</td>
<td>Not yet reached</td>
<td>13.2 months</td>
</tr>
<tr>
<td>One-year survival rate</td>
<td>61%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

ongoing INNOVATE-3 trial in ovarian cancer

A pivotal, randomized open-label study of Tumor Treating Fields (200 kHz) concomitant with weekly paclitaxel for the treatment of platinum-resistant ovarian cancer

- 540 patients randomized 1:1
- Tumor Treating Fields until progression outside the abdomen/pelvis
- Primary endpoint – overall survival (OS)
- Secondary endpoints include PFS and objective response rate

ongoing HEPANOVA trial in liver cancer

A phase 2 pilot trial of Tumor Treating Fields (150 kHz) concomitant with sorafenib for advanced hepatocellular carcinoma

- 25 patients
- Tumor Treating Fields until progressive disease per RECIST in the liver
- Primary endpoint – overall radiological response rate
- Secondary endpoints include in-field control rate, PFS at 12 months and OS at 1 year
additional presentation slides
like gravity and magnetic fields, electric fields exert forces at a distance.
electric fields exert forces on charged tubulin proteins, disrupting mitosis

MISALIGNED TUBULINS INTERFERE WITH FORMATION OF MITOTIC SPINDLE

CANCER CELL DEATH
higher doses of therapy improved survival