forward-looking statements

In addition to historical facts or statements of current condition, this presentation may contain forward-looking statements. Forward-looking statements provide Novocure’s current expectations or forecasts of future events. These may include statements regarding anticipated scientific progress on its research programs, clinical trial progress, development of potential products, interpretation of clinical results, prospects for regulatory approval, manufacturing development and capabilities, market prospects for its products, coverage, collections from third-party payers and other statements regarding matters that are not historical facts. You may identify some of these forward-looking statements by the use of words in the statements such as “anticipate,” “estimate,” “expect,” “project,” “intend,” “plan,” “believe” or other words and terms of similar meaning. Novocure’s performance and financial results could differ materially from those reflected in these forward-looking statements due to general financial, economic, regulatory and political conditions as well as issues arising from the COVID-19 pandemic and other more specific risks and uncertainties facing Novocure such as those set forth in its Annual Report on Form 10-K filed on February 27, 2020 (“2019 10-K”) and Quarterly Report on Form 10-Q filed on April 30, 2020, as amended to date, with the U.S. Securities and Exchange Commission. Given these risks and uncertainties, any or all of these forward-looking statements may prove to be incorrect. Therefore, you should not rely on any such factors or forward-looking statements. Furthermore, Novocure does not intend to update publicly any forward-looking statement, except as required by law. Any forward-looking statements herein speak only as of the date hereof. The Private Securities Litigation Reform Act of 1995 permits this discussion.

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 FDA-approved for the treatment of adults with supratentorial glioblastoma, or GBM, and for the treatment of adults with malignant pleural mesothelioma (MPM) and its approval for other indications is not certain. Novocure can provide no assurances regarding market acceptance of Optune or Optune Lua or their 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.
striving to extend survival in some of the most aggressive forms of cancer
continued track record of execution in 2020

2019

- Opened EF-31 trial in gastric cancer
- Israeli national reimbursement

2020

- Optune® approved in China
- Completed enrollment in HEPANOVA
- Opened EF-33 trial with high intensity arrays
- $575M convertible notes

2021

- Opened TRIDENT trial
- Swiss national reimbursement
- Received CE Mark for Optune Lua™
a comprehensive growth strategy

- drive commercial adoption in approved indications
- advance clinical trials in new indications and combinations
- deliver product innovation to optimize TTFields therapy

patientforward
anti-mitotic effect observed in every cancer cell line we tested.

CONTROL

TUMOR TREATING FIELDS

Non-small cell lung cancer cell line. 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.
ongoing research to identify optimal use

MECHANISTIC BASIS OF TTFIELDS

ANTI-MITOTIC

DNA REPAIR

ANTI-TUMOR IMMUNITY

CELL MEMBRANE PERMEABILITY

ANTI-MIGRATORY

AUTOPHAGY

therapy is frequency-tuned to target dividing cancer cells
growing evidence supports broad applicability in combination with certain other cancer therapies

**TUMOR TREATING FIELDS**

**WITH RADIATION THERAPY**

Tumor Treating Fields increased sensitivity to radiation therapy and inhibited DNA damage repair mechanisms in glioblastoma cells

**WITH CERTAIN CHEMOTHERAPIES**

*In vitro* dose-response effect of paclitaxel alone and in combination with Tumor Treating Fields in Lewis lung carcinoma cells

**WITH CERTAIN IMMUNOTHERAPIES**

Tumor Treating Fields in combination with anti-PD-1 were therapeutically effective *in vivo* in Lewis lung carcinoma cells

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1. *p < 0.05, **p < 0.01, Kim E.H., et al. Oncotarget 2016 Sep 20; 7(38): 62267-62279.
Tumor Treating Fields delivery systems FDA approved for GBM and MPM

**DELIVERY SYSTEM CONSISTS OF ELECTRIC FIELD GENERATOR AND TRANSDUCER ARRAYS**

[Image of the Optune® delivery system for GBM*]

**CONTINUOUS USE THERAPY INTEGRATED INTO PATIENT’S DAILY LIFE**

[Image of the Optune Lua™ delivery system for MPM**]

---

GBM: glioblastoma  
MPM: malignant pleural mesothelioma  
* Approved in the U.S. through the Premarket Authorization (PMA) Pathway  
**Approved in the U.S. through the HDE pathway

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proven to provide long-term quality survival to patients with newly diagnosed GBM

Overall survival (5-year survival analysis)$^{1,2}$

- **Optune + TMZ (n=466)**
- **TMZ alone (n=229)**

| Median OS from randomization (months) | 20.9 | 16.0 |
| Log-rank P-value                  | <0.001 |
| HR (95% CI)                       | 0.63 (0.53-0.76) |
| Median OS from diagnosis (months)  | 24.5 | 19.8 |

GBM: glioblastoma; TMZ: temozolomide; OS: overall survival; ITT: intent-to-treat


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).

5-year survival analysis was published in JAMA, December 2017
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:

- **90%-100% (n=43)**: 25 months ($P<0.05$)
- **70%-90% (n=257)**: 22 months ($P<0.05$)
- **60%-70% (n=46)**: 20 months ($P<0.05$)
- **50%-60% (n=42)**: 18 months ($P<0.05$)
- **40%-50% (n=229)**: 16 months
- **0%-40% (n=29)**: TMZ alone

**Median OS, 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.

|$P<0.05|$ vs TMZ alone.

patients treated with Optune for newly diagnosed GBM maintained quality of life over time

QoL over 12 months

- HCP-reported Karnofsky Performance Score
- Patient-reported Global Health Status

Mean KPS

Mean HRQoL Score

Time of Evaluation

Baseline 12 Months Baseline 12 Months

Optune + TMZ TMZ alone

TMZ: temozolomide
FDA approved Optune Lua™ for mesothelioma*, our first torso indication, based on STELLAR results

*unresectable, locally advanced or metastatic, malignant pleural mesothelioma (MPM) to be used together with standard chemotherapy (pemetrexed and platinum-based chemotherapy)

Optune Lua™, formerly known as the NovoTTF-100L System, was approved by FDA under the Humanitarian Device Exemption (HDE) pathway in May 2019.

Caution: Federal law restricts Optune Lua™ 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.

STELLAR results published in The Lancet Oncology, October 2019
direct-to-patient distribution model

- Novocure Device Support Specialist delivers device and trains patient
- Novocure provides supplies and 24/7 support for patients
- Novocure bills third-party payers and patients a single fee per month of therapy

patiентforward
sustained commercial momentum

net revenues (USD in millions)

41%
REVENUE GROWTH
FY 2020 VERSUS FY 2019

3,411
ACTIVE PATIENTS
AT END OF FY 2020

* Greater China includes mainland China, Hong Kong, Macau and Taiwan
room for significant growth in GBM and MPM

GBM PENETRATION RATE* BY GEOGRAPHY

<table>
<thead>
<tr>
<th>Region</th>
<th>Penetration Rate</th>
</tr>
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<tbody>
<tr>
<td>U.S.</td>
<td>38%</td>
</tr>
<tr>
<td>EMEA</td>
<td>33%</td>
</tr>
<tr>
<td>Japan</td>
<td>30%</td>
</tr>
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</table>

GBM: glioblastoma; MPM: malignant pleural mesothelioma
Information above as of Q4 2020
* Penetration rate calculated based on total newly diagnosed GBM prescriptions received in FY 2020 divided by our eligible GBM market size estimates over same period. See 2019 10-K for market size estimates.

AREAS FOR INCREMENTAL GROWTH

- Drive penetration in current markets
- Enter new markets
- Extend average duration of therapy
- Increase net revenues per patient
broadly applicable mechanism of action

CANCERS OF THE BRAIN
- 2 marketed indications
- 1 indication in development
- 4 additional cancer types with preclinical evidence

CANCERS OF THE TORSO
- 1 marketed indication
- 1 indication in development
- 2 additional cancer types with preclinical evidence

CANCERS OF THE ABDOMEN
- 0 marketed indications
- 4 indications in development
- 4 additional cancer types with preclinical evidence
TRIDENT tests potential to extend time on therapy

CURRENT GBM TREATMENT LANDSCAPE

Debulking Surgery  Radiation therapy + TMZ  TMZ + TTFIELDS

Debulking Surgery  Radiation therapy + TMZ + TTFIELDS  TMZ + TTFIELDS

TRIDENT\(^1\) ADDS TTFIELDS CONCURRENT WITH RADIATION

- 950 patients with 24 months follow-up
- Primary endpoint: overall survival
- Designed to detect hazard ratio of <0.80 (+ 5 mos. in OS)

1. clinicaltrials.gov [NCT04471844]

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patientforward
efficacy suggested in all phase 2 pilot studies

**NON-SMALL CELL LUNG CANCER PHASE 2 PILOT STUDY**

13.8 months median overall survival vs. 8.3 months in pemetrexed-alone historical control*

**PANCREATIC CANCER PHASE 2 PILOT STUDY**

median overall survival not reached vs. 8.5 mos. in nab-paclitaxel + gemcitabine historical control*

**OVARIAN CANCER PHASE 2 PILOT STUDY**

median overall survival not reached vs. 13.2 mos. in paclitaxel-alone historical control*
ongoing METIS trial in brain metastases

METIS PHASE 3 PIVOTAL, OPEN-LABEL, RANDOMIZED TRIAL DESIGN

- 270 patients with 12 months follow-up
- Primary endpoint: time to intracranial progression
- Designed to detect hazard ratio of 0.57 (+6 mos. in time to progression)
- Final data anticipated in 2022

---


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ongoing LUNAR trial in non-small cell lung cancer

LUNAR PHASE 3 PIVOTAL, OPEN-LABEL, RANDOMIZED TRIAL DESIGN\(^1\)

- 534 patients with 18 months follow-up
- Primary endpoint: overall survival
- Designed to detect hazard ratio of 0.75 (+4 mos. in OS)
- Final data anticipated in 2023

ongoing PANOVA-3 trial in pancreatic cancer

PANOVA-3 PHASE 3 PIVOTAL, OPEN-LABEL, RANDOMIZED TRIAL DESIGN

- 556 patients with 18 months follow-up
- Primary endpoint: overall survival
- Designed to detect hazard ratio of 0.75 (+5 mos. in OS)
- Final data anticipated in 2023

---


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ongoing INNOVATE-3 trial in ovarian cancer

**INNOVATE-3 PHASE 3 PIVOTAL, OPEN-LABEL, RANDOMIZED TRIAL DESIGN**

1. **Screening and baseline evaluation**
2. **Randomization 1:1**
   - TTFIELDS + weekly paclitaxel
   - Weekly paclitaxel
3. **CT/MRI scan q8w until progression**
4. **Survival follow-up**

- 540 patients with 18 months follow-up
- Primary endpoint: overall survival
- Designed to detect hazard ratio of 0.75 (+4 mos. in OS)
- Final data anticipated in 2023

---

enrollment complete in HEPANOVA phase 2 trial in liver cancer with final data expected in Q1 2021

HEPANOVA PHASE 2 PILOT TRIAL DESIGN¹

- Completed enrollment of 25 patients with 6 months follow-up
- Designed to detect an overall radiological response rate of 20% vs. 4.5% in historical controls
- Final data collection expected in Q1 2021

ongoing phase 2 pilot trial in gastric cancer in Greater China in partnership with Zai Lab

**Efficacy of TTFIELDS and FOLFOX Combination Treatment**

![Graph showing AGS overall effect](image)

The overall effect of TTFIELDS/FOLFOX combination treatment was significantly higher versus either treatment alone for the AGS cell line. * P<0.05; ** P<0.01; *** P<0.0001


**Phase 2 Pilot Trial Design Evaluating Safety and Efficacy of TTFIELDS and XELOX Chemotherapy in Gastric Cancer**

- screening and baseline evaluation
- TTFIELDS + XELOX chemotherapy q3w
- CT/MRI scan q9w until progression
- survival follow-up q12w

- 28 patients with 12 months follow-up
- Designed to detect investigator-assessed objective response rate per RECIST 1.1
- Final data anticipated in 2021
enrollment ongoing to test new high-intensity array concept in EF-33 clinical trial

PRECLINICAL RATIONALE

PHASE 2 PILOT TRIAL DESIGN TESTING SAFETY AND EFFICACY OF TTFIELDS DELIVERED THROUGH HIGH-INTENSITY ARRAYS IN RECURRENT GBM1

- 25 patients with 6-months follow-up
- Designed to detect hazard ratio of 0.6 (+2 mos. in PFS)
- Final data anticipated in 2022

Field distribution in head (slice view) with standard 9-disc transducer array (left) and high-intensity 14-disc transducer array (right) with normalized SAR.

Source: Novocure data on file

1.clinicaltrials.gov [NCT04492163].
growing oncology research interest

**IST HIGHLIGHT**
2-THE-TOP\(^1\) investigates tumor-specific immune activation

- newly diagnosed GBM, WHO grade IV, maximal safe resection or biopsy
- 24 patients

---

**31**
ACTIVE INVESTIGATOR SPONSORED TRIALS

**1,643**
CITATIONS OF TTFIELDS IN SCIENTIFIC PUBLICATIONS IN 2020\(^2\)

+45% YOY GROWTH

---

External research further advances Tumor Treating Fields’ science in solid tumor cancers and in combination with other treatment modalities

clinical collaboration with MSD* for phase 2 pilot trial in first-line non-small cell lung cancer

- Important expansion into first-line non-small cell lung cancer with a global leader in oncology
- Sign of increasing acceptance across scientific and clinical research communities
- Plan to conduct study of Tumor Treating Fields together with anti-PD-1 therapy KEYTRUDA®
- Designed to enroll 66 patients in U.S. with trial expected to begin in H1 2021

*A trademark of Merck & Co., Inc., through a subsidiary
late-stage pipeline creates potential for substantial market expansion

FUTURE POTENTIAL
+10 ADDITIONAL CANCER TYPES WITH PRE-CLINICAL EVIDENCE
+2 ONGOING PHASE 2 PILOT TRIALS

CURRENT PHASE 3 PIPELINE
20x POTENTIAL MARKET OPPORTUNITY OF TODAY
+4 ONGOING PHASE 3 PIVOTAL TRIALS

TODAY

*See 2019 10-K for market size estimates
potential to further improve efficacy through extended time on therapy and increased intensity
expanding product development programs across three areas of focus

field generator
arrays
software applications
product roadmap will prioritize impact on both TTFields dose and patient ease of use

**MAXIMUM IMPACT**

**Device 3.0**
Device 3.0 designed to optimize the use of electric fields to treat tumors

**Next gen arrays**
Next gen arrays designed to be more flexible and deliver higher intensities

**Patient-centered software**
Patient-centered software designed to support larger patient populations in multiple indications

**EASE OF USE**
## Development Pipeline by Program

### Primary Brain Cancer Program
- **Recurrent glioblastoma**
  - PHASE 2: EF-07\(^1\), EF-11\(^2\), EF-33\(^3\)
  - PHASE 3: COMPLETED

- **Newly diagnosed glioblastoma**
  - PHASE 2: EF-07\(^4\), EF-14\(^5\), TRIDENT\(^6\)
  - PHASE 3: COMPLETED, ENROLLING

### Thoracic Cancer Program
- **Mesothelioma**
  - PHASE 2: STELLAR\(^7\)
  - PHASE 3: ENROLLING

- **Brain metastasis**
  - PHASE 2: METIS\(^8\)
  - PHASE 3: ENROLLING

- **Non-small cell lung cancer**
  - PHASE 2: EF-15\(^9\), LUNAR\(^10\), KEYNOTE 836
  - PHASE 3: OPENING 2021, ENROLLING

### Abdominal Cancer Program
- **Pancreatic cancer**
  - PHASE 2: PANOVA\(^1\), PANOVA-3\(^1\)
  - PHASE 3: COMPLETED, ENROLLING

- **Ovarian cancer**
  - PHASE 2: INNOVATE\(^1\), INNOVATE-3\(^1\)
  - PHASE 3: COMPLETED, ENROLLING

- **Hepatocellular carcinoma**
  - PHASE 2: HEPAANOVA\(^5\)
  - PHASE 3: ENROLLING

- **Gastric adenocarcinoma**
  - PHASE 2: EF-31\(^6\)
  - PHASE 3: ENROLLING

### Anticipated 2021 News Flow
- **LUNAR** interim analysis
- **KEYNOTE B36** launch
- **PANOVA-3** interim analysis
- **INNOVATE-3** interim analysis
- **HEPAANOVA** final data readout
- **EF-31** final data readout

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5. Skupski et al. JAMA 2017;318:2202-2204
10. Clinicaltrials.gov NCT02917799
12. Clinicaltrials.gov NCT02917799
14. Clinicaltrials.gov NCT02917799
15. Clinicaltrials.gov NCT02917799
16. Clinicaltrials.gov NCT02917799
17. Clinicaltrials.gov NCT02917799
18. Clinicaltrials.gov NCT02917799
19. Clinicaltrials.gov NCT02917799
20. Clinicaltrials.gov NCT02917799
increasing acceptance for TTFields across the global oncology community

TUMOR TREATING FIELDS ECOSYSTEM

NOVOCURE RESEARCH & DEVELOPMENT
- Translational research
- Clinical development
- Product innovation

EXTERNAL FUNDING
- Research grants
- inovivo projects
- inovitro projects
- Investigator-sponsored trials

PATIENT SUPPORT NETWORK
- Patients and caregivers
- Optune® and Optune Lua™ prescribers
- Patient advocacy groups

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<table>
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<tr>
<th>3</th>
<th>18,000+</th>
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<tr>
<td>FDA-APPROVED INDICATIONS</td>
<td>PATIENTS TREATED GLOBALLY*</td>
</tr>
</tbody>
</table>

| $494M | $112M | $843M |
| IN 2020 GLOBAL NET REVENUES | IN R&D INVESTMENTS IN LAST 4 QUARTERS** | CASH ON HAND† |

| 5 | 185+ |
| INDICATIONS IN LATE-STAGE DEVELOPMENT | ISSUED PATENTS AND PENDING PATENT APPLICATIONS GLOBALLY |

building on 20 years of innovation to pioneer an emerging modality in cancer care

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* As of December 31, 2020
** Q4 2019 through Q3 2020
† Cash, cash equivalents and short-term investments as of December 31, 2020
together with our patients, we strive to extend survival in some of the most aggressive forms of cancer
Optune Lua™ and Optune® indications for use and important safety information

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.
- 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.

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 Optune Lua in patients with MPM with implantable electronic medical devices, such as pacemakers or implantable automatic defibrillators, etc.
- Use of Optune for GBM or Optune Lua 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 Optune Lua for MPM in patients known to be sensitive to conductive hydrogels. Skin contact with the gel used with Optune or Optune Lua may commonly cause increased redness and itching, and may rarely lead to severe allergic reactions such as shock and respiratory failure.
Optune Lua™ and Optune® indications for use and important safety information

WARNINGS AND PRECAUTIONS

- Optune and 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 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 Optune Lua 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 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 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 or Optune Lua treatment.
- Do not prescribe Optune or 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 and Optune Lua 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 OptuneLua.com to see the Optune Lua IFU for complete information regarding the device’s indications, contraindications, warnings, and precautions.