Combination of Optune® with Temozolomide Demonstrates Unprecedented Five-Year Survival for Newly Diagnosed Glioblastoma Patients

*Newly diagnosed glioblastoma patients treated with Optune plus temozolomide were able to maintain quality of life for longer compared to those treated with temozolomide alone*

*Data presented today as a late-breaking oral presentation at the American Society for Radiation Oncology’s 2017 Annual Meeting*

**St. Helier, Jersey** – Novocure (NASDAQ: NVCR) announced today results from its phase 3 pivotal EF-14 trial adding Optune to temozolomide for the treatment of newly diagnosed glioblastoma (GBM), including results from health-related quality of life analyses, were presented at the American Society for Radiation Oncology’s (ASTRO) 2017 Annual Meeting in San Diego. This marks the first presentation of EF-14 five-year survival and quality of life data at a radiation oncology conference.

A late-breaking oral presentation focused on Novocure’s EF-14 phase 3 pivotal trial, which demonstrated unprecedented five-year survival results in newly diagnosed GBM. Patients treated with Optune in combination with temozolomide experienced a significant extension of overall survival without added toxicity compared to patients treated with temozolomide alone. The data also showed that Optune-treated patients were able to maintain quality of life for longer compared to patients treated with temozolomide alone.

“As the first treatment in more than 10 years to improve overall survival in newly diagnosed GBM, Optune has been proven to make a difference in the lives of GBM patients,” said Dr. Eilon Kirson, Novocure’s Chief Science Officer and Head of Research and Development. “It is great to have Optune as a topic of discussion in radiation oncology.”

The EF-14 data showed median overall survival was extended by nearly five months for patients who received Optune in combination with temozolomide versus patients who received temozolomide alone. When measured annually for five consecutive years, patients treated with Optune in combination with temozolomide maintained superior rates of survival in newly diagnosed GBM versus patients treated with temozolomide alone. The five-year survival rate was 13 percent for patients treated with Optune together with temozolomide versus five percent for patients treated with temozolomide alone.

The EF-14 data also showed that Optune with temozolomide did not negatively impact health-related quality of life, except for itchy skin. The combination treatment of Optune with temozolomide improved deterioration-free survival of several predefined health-related quality of life scales, compared to treatment with temozolomide alone.
Patients were asked to complete two validated health-related quality of life questionnaires (EORTC QLQ-C30 and BN20) at the beginning of the trial and every three months thereafter for as long as they were participating in the study. Health-related quality of life over time was assessed for nine preselected scales: global health, physical, cognitive, role, social and emotional functioning, itchy skin, pain and weakness of legs. The results were as follows:

- More patients treated with the combination of Optune and temozolomide reported stable or improved scores on: global health status (53 percent versus 38 percent, \(p=.001\)), pain (57 percent versus 36 percent, \(p<.0001\)), physical functioning (54 percent versus 38 percent, \(p=.001\)) and leg weakness (59 percent versus 42 percent, \(p=.001\)) when compared to patients treated with temozolomide alone.

- Deterioration-free survival (the time until quality of life declined by more than 10 points or disease progression) was longer (\(p<.01\)) for patients treated with the combination of Optune and temozolomide versus patients treated with temozolomide alone for: global health (4.8 versus 3.3 months), physical (5.1 versus 3.7 months) and emotional functioning (5.3 versus 3.9 months), pain (5.6 versus 3.6 months) and leg weakness (5.6 versus 3.9 months).

- Time to deterioration (the time until quality of life declined by more than 10 points, excluding disease progression) did not significantly differ between treatment arms, except for itchy skin (8.2 months for patients treated with Optune plus temozolomide versus 14.4 months for patients treated with temozolomide alone, \(p<.001\)), and pain (13.4 months for patients treated with Optune plus temozolomide versus 12.1 months for patients treated with temozolomide alone, \(p<.001\)).

- Health-related quality of life over time did not significantly differ between treatment arms except for itchy skin, which was worse with Optune plus temozolomide versus temozolomide alone, at three, six and nine months (\(p=.0004\)).

The following will be presented at the ASTRO 2017 Annual Meeting:

**Late-breaking oral presentation**
*(LBA-6) Tumor Treating Fields (TTFields) – A novel cancer treatment modality: Translating preclinical evidence and engineering into a survival benefit with delayed decline in quality of life. R. Stupp. 3:15 – 4:15 p.m. PST on Sunday, September 24. (Location: Ballroom 20)*

**Oral presentation**
*(68) Tumor Treating Fields (TTFields) Delay DNA Damage Repair Following Radiation Treatment of Glioma Cells: Implications for Irradiation through TTFields Transducer Arrays. M. Story. 7:45 to 9 a.m. PST on Monday, September 25. (Location: Room 4)*

**Poster presentation**
Creating patient-specific computational head models for the study of tissue-electric field interactions using deformable templates. N. Urman. 4:15 to 5:45 p.m. PST on Monday, September 25. (Location: Poster Hall)

Measuring the electric properties of human skin in order to understand how Tumor Treating Fields distribute within the body. H. Hershkovich. 4:15 to 5:45 p.m. PST on Monday, September 25. (Location: Poster Hall)

About Novocure
Novocure is an oncology company developing a profoundly different cancer treatment utilizing a proprietary therapy called TTFields, the use of electric fields tuned to specific frequencies to disrupt solid tumor cancer cell division. Novocure’s commercialized product, Optune, is approved for the treatment of adult patients with glioblastoma. Novocure has ongoing or completed clinical trials investigating TTFields in brain metastases, non-small cell lung cancer, pancreatic cancer, ovarian cancer and mesothelioma.

Headquartered in Jersey, Novocure has U.S. operations in Portsmouth, New Hampshire, Malvern, Pennsylvania and New York City. Additionally, the company has offices in Germany, Switzerland, Japan and Israel. For additional information about the company, please visit www.novocure.com or follow us at www.twitter.com/novocure.

Approved 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.

Important Safety Information
Contraindications: Do not use Optune if you have an active implanted medical device, a skull defect (such as, missing bone with no replacement), or bullet fragments. Use of Optune together with implanted electronic devices has not been tested and may theoretically lead to malfunctioning of the implanted device. 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 if you are known to be sensitive to conductive hydrogels. In this case, skin contact with the gel used with Optune may commonly cause increased redness and itching, and rarely may even lead to severe allergic reactions such as shock and respiratory failure.

**Warnings and Precautions:** Use Optune only after receiving training from qualified personnel, such as your doctor, a nurse, or other medical personnel who have completed a training course given by Novocure (the device manufacturer).

Do not use Optune if you are pregnant, you think you might be pregnant or are trying to get pregnant. It is not known if Optune is safe or effective in these populations.

The most common (≥10%) adverse events involving Optune in combination with temozolomide were low blood platelet count, nausea, constipation, vomiting, fatigue, scalp irritation from device use, headache, convulsions, and depression.

The most common (≥10%) adverse events seen when using Optune alone were scalp irritation from device use and headache.

The following adverse reactions were considered related to Optune when using the device alone: scalp irritation from device use, headache, malaise, muscle twitching, fall and skin ulcer.

All servicing procedures must be performed by qualified and trained personnel.

Do not use any parts that do not come with the Optune Treatment Kit, or that were not sent to you by the device manufacturer or given to you by your doctor.

Do not wet the device or transducer arrays.

If you have an underlying serious skin condition on the scalp, discuss with your doctor whether this may prevent or temporarily interfere with Optune treatment.

Please visit [Optune.com/Safety](http://Optune.com/Safety) for Optune Instructions For Use (IFU) for complete information regarding the device’s indications, contraindications, warnings, and precautions.

**Forward-Looking Statements**

In addition to historical facts or statements of current condition, this press release 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, development of potential products, interpretation of clinical results, prospects for regulatory approval, manufacturing development and capabilities, market prospects for its products, 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 more specific risks and uncertainties facing Novocure such as those set forth in its Annual Report on Form 10-K filed on February 23, 2017, 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.

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