The role of Frequency Modulation in the Magic Light Anti-Cancer Therapy

Lev Dvorkin
CEO, Magic Light Medical Ltd, Nessiei Israel 27/20, Karmiel 2192307, Israel

Abstract

The role of frequency modulation in the Magic Light anti-cancer therapy was investigated both in theory and in clinical trials. The existence of at least four different optimal modulation frequencies is required for cancer treatment. This was disclosed and explained by the presence of at least four different kinds of cancer cells within the same cancer, whereby each cancer cell type has its own speed of proliferation. The application of several different frequencies for cancer treatment in turn, during each treatment session, thus allows the Magic Light therapy to cure any type of cancer faster and completely.

Introduction

Over the past two decades, new cancer treatment methods have been actively studied and developed. The most promising of them are methods which use alternating electromagnetic fields, since these methods do not have negative side effects [1, 2, 3 and 4]. Historically, the first such technique is known as Method TTF (Tumor-Treating Fields) with the using of frequencies in the range 100 – 300 kHz. This method used both AM (Amplitude Modulation), as it was described in [1], and FM (Frequency Modulation), as it was described in [4]. Each type of modulation has some positive effect on cancer treatment efficiency. Other methods, described in [2, 3], used AM on carrier frequency 27.12 MHz. All these methods can influence chemical reactions inside the cancer cells but cannot reprogram cancer cells. For this reason, they cannot cure cancer completely and independently without the application of additional well-known and traditional methods of cancer treatment such as surgery, chemotherapy, immunotherapy or X-Ray irradiation.

Unlike all the above listed methods for cancer treatment, the Magic Light anti-cancer therapy uses electromagnetic waves at a frequency of 430 MHz, which can interact directly with nucleotides inside genes of cancer cells during their dividing process. Thus, these RF waves are able to reprogram epigenetically, cancer cells into normal ones, which will die after several divisions [5, 6].

Theory

The Magic Light method uses for cancer treatment irradiation by RF waves at frequency f = 430 MHz, corresponding to the wavelength $\lambda = 0.68$ m. As it was shown in [5], they generate virtual photons according to the equation:

$$\lambda = k \cdot \lambda_v,$$

(1)

Where $k = 2 \cdot 10^9$ is the dimensionless coefficient, and $\lambda_v$ is wavelength of virtual photons. In this case $\lambda_v = 0.34$ nm.

If the bandwidths of generated RF signal $f_{bw}$ is equal to: $f_{bw} = 25$ kHz, then virtual photons will be generated in
the wavelength range: from $f-f_{bw}/2$ to $f+f_{bw}/2$. When
the frequency modulation ($f_m$) is used, the wavelength
range will be equal to: From

$$(f-f_{bw}/2) - f_m \text{ to } (f+f_{bw}/2) + f_m$$

(2)

If the carrier frequency $f = 430$ MHz, bandwidth $f_{bw} = 25$
kHz and frequency of modulation $f_m = 5$ kHz, then
modulated signal will be in the range: 429.983 MHz –
430.175 MHz, or 0.6974 m - 0.6977 m = 0.0003 m =
3$\times$10$^{-4}$m, what corresponds to pulsation of static
electric field of virtual photons in the volume in the
range 6$\times$10$^{-13}$ m. If frequency of modulation is equal to
20 kHz, then pulsation of static electric field of virtual
photons in the volume are in the range 24$\times$10$^{-13}$ m.
So, when FM modulation was used in the Magic Light
therapy for treating cancers and tumors, frequency
modulated RF waves generate static electric fields with
amplitude of pulsations from 6$\times$10$^{-13}$ m to 24$\times$10$^{-13}$ m in
the volume. These amplitudes are very small, but they
still can have an influence on connections between
nucleotides at the time of their proliferation and even
to be enough to disconnect (to cleave) them.

When using the FM modulation, the electric field of
virtual photons will be changed not only in space, but
also in time. The period of these pulsations depends on
the frequency of modulation. For example, when $f_m = 4$
kHz, the duration of one pulsation is equal to: $T_1 = 0.25$
ms, and if $f_m = 20$ kHz, then $T_2 = 0.05$ ms. The process of
cancer cells division also occurs over some time, when
the connections at the ends of telomeres of two
diverging new cells are subject to increasing tension
and these connections can be cleaved under external
influences by a weak static electric field.

In such a case, periods $T_1$ and $T_2$ can be the interaction
periods to cleave nucleotides connections, and they will
depend on the speed of the cancer cells proliferation.
Experimental tests confirmed these predictions.

**Experimental Part**

In the work [6], an experimental dependence of the
effectiveness of treatment of Prostate Adenocarcinoma from modulation frequency using the
Magic Light therapy was presented, shown below in Fig.
1. The author did this experiment on himself.

![Figure 1: Efficiency of Prostate Adenocarcinoma Treatment vs Frequency of Modulation](image)

**Figure 1:** Efficiency of Prostate Adenocarcinoma Treatment vs Frequency of Modulation

Patient: Lev Dvorkin (65), ID: 307436816, Israel. Clinical
protocol: Frequency 430 MHz, RF Power Density 12
mW/cm$^2$, distance is equal to 1 m, each session was 30
min long, once a day, twice a week; levels of PSA were
measured each month, once a month.

Using the theory presented above, we can not only
explain the presence of one optimal modulation
frequency for the treatment of Prostate Adenocarcinoma, but we can also explain why there are
at least two different frequencies on the experimental
dependence. From the fact of the existence of at least
two different optimal modulation frequencies for
treatment of Prostate Adenocarcinoma, it follows that
in one Prostate Adenocarcinoma tumor there are at
least two different types of cancer cells that differ in the
rate of their division. This conclusion was confirmed by
the experimental results shown in the Fig. 2 and the Fig.
3 below.
In both described cases, we saw a decrease in the PSA value after the start of the therapy and then the PSA value returns to its previous value. Accordingly, initially at the start of therapy at 4 kHz, the MRI test was showed PIRADS 3 and signs of the cancer. A biopsy test indicated that in one probe out of a total 6 probes, there was found 25% of Prostatic Adenocarcinoma cells in the volume of this probe. After finishing the treatment, the MRI test showed PIRADS 1 and no signs of the cancer, as was described by the author of this work in [5]. But the next MRI test, carried out one year later, showed PIRADS 4 again and the presence of signs of the cancer in the area with size 0.7 cm. The next biopsy test from this area indicated that in one probe out of a total 7 probes, it was found that there was less than 5% of Prostatic Adenocarcinoma cells by volume within this probe. As can be seen from Fig. 3, using frequency of modulation 7 kHz leads to the same therapy result. From all these results, it follows that the use of only one frequency of modulation in the Prostate Adenocarcinoma treatment can leads to apoptosis of only one part of the cancer cells, while all other parts of the cancer cells will continue proliferation without dying.

All these results were confirmed by the next clinical trial for treatment of Invasive Ductal Carcinoma (IDC), which was cured completely and this process was described in detail in [6]. In this case the first step of the therapy was treatment at frequency of modulation 4 kHz during an initial three-month period. After this, the second step was treatment at frequency of modulation 7 kHz during another two-month period and the third step was treatment at frequency of modulation 10 kHz during a final two-month period.

In order to find any additional optimal modulation frequencies to frequencies 4 kHz and 7 kHz, which were shown on Fig 1, the following experiment was conducted. If reducing the cell metabolism is required as part of the reprogramming process, then the necessity of reduction in the metabolism from the modulation frequency should be tested and the frequency of modulation. This will provide the maximum reduction in the body temperature (and the corresponding intensity of the cell metabolism) and should be tested for cancer cells during the reprogramming process. Results of this experiment are shown on a Fig. 4a and on a Fig. 4b below.
As one can see on the Fig 4a, the modulation frequency of 13 kHz, looks an optimal choice for testing in the cell reprogramming process because at this frequency, the reduction in the cell metabolism was maximal. As one can see on the Fig 4b, the modulation frequency 21 kHz also looks an optimal choice to test it in the cell reprogramming process because at this frequency, the reduction in the cell metabolism was maximal and the process of reducing the metabolism was longer.

This is why the author conducted the clinical trial for the treatment of Prostate Adenocarcinoma in order to check these assumptions. In this clinical trial, the Magic Light therapy of the Prostate Adenocarcinoma was carried out in the following manner: Part 1 with two different frequencies of modulation in turn in one session, Part 2 with three different modulation frequencies in turn correspondingly during each session, Part 3 and Part 4 with four different modulation frequencies in turn correspondingly during each session. Part 1 was at frequencies 4 kHz and 7 kHz; Part 2 was at frequencies 4 kHz, 7 kHz and 10 kHz, Part 3 was at frequencies 4 kHz, 7 kHz, 10 kHz and 13 kHz and Part 4 was at frequencies 4 kHz, 7 kHz, 10 kHz and 21 kHz. The result of this clinical trial is presented in Fig. 5 below.

**Clinical Trial Protocol for treatment of the Prostate Adenocarcinoma Grade I-II**

Patient: Lev Dvorkin (67), ID: 307436816, Israel.

Part 1 Clinical protocol: Frequency 430 MHz, frequency of modulation; 4 kHz for 30 minutes, then switch to 7 kHz, once a day, three times a week, 15 sessions in a month, RF Power Density was 12 mW/cm² and distance to the patient body is equal to 1 m. PSA was measured once a month.

Part 2 Clinical protocol: Frequency 430 MHz, frequency of modulation; 4 kHz for 25 minutes, then switch to 7 kHz also for 25 minutes, once a day, three times a week, 15 sessions in a month, RF Power Density was 12 mW/cm² and distance to the patient body is equal to 1 m. PSA was measured once a month.
sessions in a month. RF Power Density was 12 mW/cm², and distance from the antenna to the patient body is equal to 1 m. PSA was measured once a month.

Part 3 Clinical protocol: Frequency 430 MHz, frequency of modulation 4 kHz for 25 minutes, then switch to 7 kHz also for 25 minutes, then switch to 10 kHz also for 25 minutes. Then switch to 13 kHz for 25 min, once a day, three times in a week, 15 such sessions in a month, RF Power Density was 12 mW/cm², and distance from the antenna to the patient body is equal to 1 m. PSA was measured once a month.

Part 4 Clinical protocol: Frequency 430 MHz, frequency of modulation 4 kHz for 30 minutes, then switch to 7 kHz also for 30 minutes, then switch to 10 kHz also for 30 minutes. Then switch to 21 kHz for 30 min, once a day, twice a week, 10 such treatment sessions in a month, RF Power Density was 12 mW/cm² and distance from the antenna to the patient body is equal to 1 m. PSA was measured once a month.

![Figure 5: Clinical Trial for the Prostate Adenocarcinoma Stage I treatment with the Magic Light Therapy](image)

The blood tests for measuring of Prostatic-Specific Agent (PSA) level are commonly used for the detection of prostate cancer, as well for detecting of Benign Prostatic Hyperplasia (BPH) — it is a condition in men in which the prostate gland is enlarged but not cancerous. Normal PSA level is below 4, and increased PSA level may indicate the presence of prostate cancer (Adenocarcinoma) cells or the presence of BPH [7, 8, 9]. Increasing prostate volume can also be detected and measured by using the MRI test.

So, treatment of the Prostate Adenocarcinoma in our case includes treatment of two different diseases in the same time: cancer treatment and BPH treatment. In Fig. 5 one can see that cancer treatment period is equal to: 2 – 4 months and BPH treatment period is at least: 4 – 6 months. The BPH treatment on Fig. 5 is not finished and should be continued.

As one can see from the Fig. 5 above, optimal frequencies of modulation for effective Adenocarcinoma treatment are following: 4 kHz, 7 kHz, 10 kHz and 21 kHz, and they have to be applied in turn during one treatment session for the best and fastest anti-cancer treatment effect.

Stage IV (or Grade IV) is the most severe stage of cancer. Metastatic cancer is another name for this stage. It conveys that the cancer has metastasized — spread to distant areas of the body. Some may refer to it as end-stage cancer.

<table>
<thead>
<tr>
<th>Cancer type</th>
<th>5-year relative survival rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>31% (National Cancer Institute)</td>
</tr>
<tr>
<td>Lung</td>
<td>8.2% (National Cancer Institute)</td>
</tr>
<tr>
<td>Colorectal</td>
<td>15.6% (National Cancer Institute)</td>
</tr>
<tr>
<td>Prostate</td>
<td>34.1% (National Cancer Institute)</td>
</tr>
<tr>
<td>Stomach</td>
<td>6.6% (National Cancer Institute)</td>
</tr>
</tbody>
</table>

Healthy cell tissue often contains many types of cell groups together. If cancerous tissue looks like healthy tissue with many different cell groups, it’s considered a low-grade tumor. If the cancerous tissue looks very different from healthy tissue, it’s considered a high-grade tumor. Stage 4 cancer usually can’t be cured. In addition, because it’s usually spread throughout the body by the time it’s diagnosed, it is unlikely the cancer can be completely removed by using of traditional
methods (surgery, chemotherapy, immunotherapy or X-Ray irradiation). The goal of traditional treatment methods in this case is to prolong survival and improve the patient’s quality of life.

In our case, we have the possibility to cure also metastatic cancer, or cancer Stage IV completely, using new anti-cancer therapy, named Magic Light, which was described in this work and in works [5, 6]. The Magic Light method and technology uses frequency-modulated RF irradiation of the patient’s body without focusing on its small parts. Any cancer cell in this case will be reprogrammed at the time of their proliferation into regular-like cell and then will go to apoptosis, no matter where it is present. Because all cancer cells cannot proliferate all at the same time, treatment sessions should be repeated until the cancer will be cured completely by the Magic Light method and device.

**Conclusion**

- For complete cure of Adenocarcinoma and Invasive Ductal Carcinoma the following set of optimal modulation frequencies during one treatment session should be used: 4 KHz, 7 kHz, 10 kHz and 21 kHz.
- The Magic Light anti-cancer therapy it is universal and effective cancer treatment method to cure all kinds of cancers.
- The number of required treatment sessions depends on the degree of the disease.
- Different kinds of cancers can be cured using the same combination of modulation frequencies at the same carrier frequency and RF power density.
- The optimal time delay between each two-treatment sessions, depends upon the type of cancer and the speed of cancer cells proliferation. For aggressive types of cancer with high proliferation speed, 12–48 hours delay is recommended and for other kinds with slow proliferation speed, 72 hours delay is recommended.

**The Main Advantages of the Magic Light Anti-Cancer Therapy are Following**

1. Magic Light therapy is effective for treating of different cancer types, such as Carcinoma, Adenocarcinoma, Squamous Cell Carcinoma, Neuroblastoma and so on.
2. Magic Light therapy can be used for a complete cure of cancer at any stage of the cancer (I–IV).
3. Magic Light therapy has no limit in the number of its applications.
4. Magic Light therapy has 10,000,000 times less photon energy than UV radiation and 10^{13} times less than X-ray radiation and therefore cannot reprogram or damage the non-dividing cells, will not produce any mutations and, as was expected, has no any negative side effects.

**References**


[8] Ezenwa EV, Tijani KH, Jeje EA, et al. The value of percentage free prostate specific antigen (PSA) in the detection of prostate cancer among patients with intermediate levels of total PSA (4.0-10.0 ng/mL) in Nigeria. Arab J Urol. 2012 Dec;10(4):394-400. doi: 10.1016/j.aju.2012.05.004