

Exhibit 4



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

SEP - 5 2001

Mr. John Brenna  
President  
Computerized Thermal Imaging, Inc.  
476 Heritage Park Blvd., Suite 210  
Layton, Utah 84041

Re: P010035  
CTI™ BCS 2100  
Filed: June 15, 2001  
Amended: August 22, 2001

Dear Mr. Brenna:

The Center for Devices and Radiological Health (CDRH) of the Food and Drug Administration (FDA) has completed an initial scientific review of the above referenced premarket approval application (PMA). We regret to inform you that on the basis of this review, we have concluded that the PMA lacks information needed to complete the review and determine whether there is reasonable assurance that the device is safe and effective for its intended use.

The information provided is not sufficient to support approval of your device for its intended use. Because of this lack of information, review of the PMA cannot continue and, accordingly, we have listed the following significant deficiencies, which require the responses as indicated:

1. Please "provide a 95% confidence interval of +/- 5%" for the receiver operator curve (ROC) area under the curve (AUC). (See Protocol, page 16.)
2. Please either support or remove your claim that "the CTI Breast Cancer System 2100, when used as an adjunct to clinical examination, ... enabled radiologists to identify subjects who should go to biopsy and those who should not". (See pages 454 and 476.)
3. Please provide evidence in support of your claim that the CTI System "...showed statistically significant adjunctive performance for thermal imaging of 5.2% in increased area under the curve (AUC)." (See Efficacy 2, page 509.) Note that your favorable statistically significant overall separation of ROC AUC for index of suspicion (IOS) and level of suspicion (LOS1) combined (IOS+LOS1) from that for LOS1 alone may be lost within the clinically important ROI for sensitivity  $\geq 94\%$ . (See Graph 5.9.a. and Table 5.9.g., on page 496.)
4. Please justify your exclusion of relatively high masked reread categories since any such exclusion should properly be based on the initial reading which you found to be biased. (See pages 497-502.)
5. Please revise your label to clearly reflect your finding that exclusion of lesions consisting only of micro-calcifications might produce better adjunctive results. (See tables 5.9.h. and 5.9.j., on pages 498 and 500.)
6. Please explain why your 7 independent radiologist evaluators were not requested to provide any continuous mammography-based IOS, which would have allowed a fair comparison between [mammography-based IOS] and (IOS+[mammography-based IOS]). (See tables 5.9.j. and 5.9.x., on pages 500 and 502.)

7. Please provide sufficient statistical support for your finding of a “statistically significant difference in the specificity”, which “is enhanced when proceeding from the predominately fatty breast to the extremely dense breast”. (See page 503.)
8. Please provide the distribution of the subjects analyzed with respect to their mammographic LOS scores (i.e., how many fell into the LOS 0, 1, etc. categories?). This relates to the target population in the Indications for Use. You chose to include in the clinical trial only women who were scheduled to receive biopsy, the outcome of which could be used as a gold standard for ROC construction. However, in the Indications for Use, if you include in the target population only women being considered for biopsy, then the failure of the device to achieve a 100% sensitivity means that at least some women with cancer would have their biopsies delayed by use of the device, with no compensation by others raised to that category from a lesser category, such as short-term follow-up. The net effect would then be to delay the biopsy of some women with cancer along with cancellation of biopsies for some women without cancer. The former, which could potentially give rise to an otherwise preventable premature death from breast cancer, is an unacceptable price to pay for the saving of a small proportion of biopsies of lesions that turn out to be benign. Therefore, you will need to expand your Indications for Use to a target population that, in addition to women being considered for biopsy, also includes women who are being considered for short-term follow-up. Of course, until you provide us with the distribution of subjects analyzed with respect to their mammographic LOS scores, we cannot tell whether there is an adequate number of the latter category to compensate for the delay of biopsies in women with cancer.
9. In addition to answering question 8, please analyze the data to reveal the net flow from biopsy to follow-up, and from follow-up to biopsy, for women both with and without cancer.
10. Please provide a revised Summary of Safety and Effectiveness Data which includes a more descriptive presentation of the device and a more thorough summary of your clinical trial, the various data sets (including number of lesions analyzed), the statistical analysis and findings and the conclusions which were supported by the data. This should be provided in both a hard copy and electronic version.

The deficiencies identified above represent the issues that we believe need to be resolved before our review of your PMA application can be completed. In developing the deficiencies, we carefully considered the statutory criteria as defined in Section 515 of the Federal Food, Drug, and Cosmetic Act for determining reasonable assurance of safety and effectiveness of your device. We also considered the burden that may be incurred in your attempt to respond to the deficiencies. We believe that we have considered the least burdensome approach to resolving these issues. If, however, you believe that information is being requested that is not relevant to the regulatory decision or that there is a less burdensome way to resolve the issues, you should follow the procedures outlined in the “A Suggested Approach to Resolving Least Burdensome Issues” document. It is available on our Center webpage at:  
<http://www.fda.gov/cdrh/modact/leastburdensome.html>

This letter reflects the current progress of our review of your application. Please be advised that further substantive review of your application or any response to this letter may result in additional deficiencies.

This is to advise you that an amendment including the above requested information will be considered a major amendment and may extend the FDA review period up to 180 days. As provided by 21 CFR 814.37(c), you may decline to submit a major amendment requested by FDA in which case the review period may be extended for the number of days that elapse between the date of such request and the date that FDA receives the written response declining to submit the requested amendment. As provided under 21 CFR 814.44(g), FDA will consider this PMA to have been voluntarily

withdrawn if you fail to respond in writing within 180 days of the date of this request for a PMA amendment. You may, however, amend the PMA within the 180-day period to request an extension of time to respond. Any such request is subject to FDA approval and should justify the need for the extension and provide a reasonable estimate of when the requested information will be submitted. If you do not amend the PMA within the 180-day period to (1) correct the above deficiencies, or (2) request an extension of time to respond and have the request approved, any amendment submitted after the 180-day period will be considered a resubmission of the PMA and will be assigned a new number. Under these circumstances, any resubmission will be given a new PMA number and will be subject to the requirements of 21 CFR 814.20.

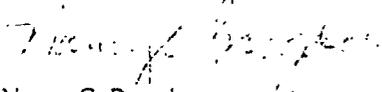
You may amend the PMA to provide the above requested information (5 copies), voluntarily withdraw the PMA (3 copies), direct CDRH to complete processing the PMA without the submission of additional information (3 copies) or request an extension. The required copies of the amended PMA should include the FDA reference number for this PMA and should be submitted to the following address:

PMA Document Mail Center (HFZ-401)  
Center for Devices and Radiological Health  
Food and Drug Administration  
9200 Corporate Blvd.  
Rockville, Maryland 20850

Upon receipt of an amendment adequately addressing the above requests or a written response declining to submit the requested amendment, CDRH may schedule an advisory panel meeting at which your PMA will be reviewed. You will be notified of the location and date of this meeting should one be necessary. Any additional information to be included in your PMA should be submitted in the form of a PMA amendment and be received by FDA at least 8 weeks in advance of the scheduled advisory panel meeting in order for FDA and the panel members to have adequate time to review the new information. Information received by CDRH less than 8 weeks in advance of a scheduled advisory panel meeting will not be considered or reviewed at the meeting and may delay consideration of your PMA until a subsequent advisory panel meeting.

If you have any questions regarding this letter, please contact John C. Monahan at (301) 594-1212.

Sincerely yours,

  
Nancy C. Brogdon  
Director, Division of Reproductive,  
Abdominal, and Radiological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health