

Securities and Exchange Commission
Division of Corporate Finance
100 F Street, N.E.
Washington, D.C. 20549
Attention: Brian R. Cascio, Accounting Branch Chief

**Re: Accuray Incorporated
Form 10-K for the Fiscal Year Ended June 30, 2010
Filed on September 1, 2010
File Number: 000-33301**

Dear Mr. Cascio:

We are responding to the comments raised by the staff (the "Staff") of the Securities and Exchange Commission in a letter dated October 28, 2010 (the "Comment Letter") related to the above referenced filing. We appreciate the Staff's (specifically, Jeanne Bennett and Aslynn Hogue) accommodating our request to have until November 29, 2010, to submit our response. For your convenience, we have repeated the comments contained in the Comment Letter below in italic type before our response.

Form 10-K for the fiscal year ended June 30, 2010

Item 1. Business

- We note your disclosure that your CyberKnife system is designed to treat solid tumors anywhere in the body as an alternative to traditional (invasive) surgery. With a view towards revised disclosure in your future filings, please tell us which cases your system would not be indicated for and the reasons why.*

Response:

In our future filings, we will include the following disclosure, updated as appropriate, regarding the types of cases for which the CyberKnife system may not be indicated:

A determination of when it may or may not be appropriate to use the CyberKnife system for treatment is at the discretion of the treating physician and

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depends on the specific patient. Given, however, the CyberKnife system's design to treat focal tumors, the CyberKnife system is generally not used to treat (1) very large tumors, which are considerably wider than the radiation beam that can be delivered by the CyberKnife system, (2) diffuse, wide-spread disease, as is often the case for late stage cancers, because they are not localized (though the CyberKnife system might be used to treat a focal area of the disease) and (3) systemic disease, like leukemias and lymphomas, which are not localized to an organ, but rather involve cells throughout the body.

- We note your disclosure that the cost of your system is a factor affecting the sales of your product. In future filings, please also disclose, to the extent known, the range of costs for the facilities that are required to be constructed to house your systems and enhance your disclosure as appropriate.*

Response:

We acknowledge the Staff's request that our future filings include additional information regarding the costs associated with the radiation-shielded facilities customers must have to house the CyberKnife system. Although Accuray is not typically responsible for the costs associated with building these facilities, as we discussed with the Staff, our future filings will disclose, to the extent known, the range of costs for the facilities that are required to be constructed to house our systems, and our disclosure will be enhanced as appropriate.

Selected Financial Data, page 51

- We see that you present a line item captioned "net income attributable to common shareholders". Please tell us why you have included this caption since there does not appear to be any other equity ownership that would also share net income.*

Response:

We acknowledge the Staff's comment regarding the reference to "common shareholders" in the referenced caption of our Selected Financial Data table. The Staff correctly notes that we have only one class of equity ownership outstanding. We do have authorized blank check preferred stock, though none is outstanding. The reference to "common shareholders" is a legacy reference from a time at which we had outstanding preferred stock. Accordingly, in our future filings, we will revise this caption to read "Net income (loss)."

Management's Discussion and Analysis

Critical Accounting Policies and Estimates, page 67

- Please revise future filings to provide a discussion of your critical accounting policies including judgments and uncertainties affecting the application of those policies, and the*

likelihood that materially different amounts would be reported under different conditions or using different assumptions. Such disclosure should supplement, not duplicate, the description of accounting policies that are already disclosed in the notes to the financial statements. The disclosure should provide greater insight into the quality and variability of information regarding financial condition and operating performance. Please note that while accounting policy notes in the financial statements generally describe the method used to apply an accounting principle, the discussion in MD&A should present a company's analysis of the uncertainties involved in applying a principle at a given time or the variability that is reasonably likely to result from its application over time. Refer to FR-72 and SEC Release No. 33-8040.

Response:

We acknowledge the Staff's request for a discussion of our critical accounting policies in our Management's Discussion and Analysis, including judgments and uncertainties affecting the application of those policies, and the likelihood that materially different amounts would be reported under different conditions or using different assumptions. Accordingly, our future filings will include the following discussion, updated as appropriate, of our critical accounting policies:

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as revenue and expenses during the reporting periods. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities. Actual results could therefore differ materially from those estimates if actual conditions differ from our assumptions.

Note 2, "Summary of Significant Accounting Policies," in Notes to the Consolidated Financial Statements, which is included in Item 8. Financial Statements and Supplementary Data, describes our significant accounting policies and methods used in the preparation of our Consolidated Financial Statements. The methods, estimates and judgments that we use in applying our accounting policies require us to make difficult and subjective judgments, often as a result of the need to make estimates regarding matters that are inherently uncertain. Management believes the critical accounting policies and estimates are those related to revenue recognition, inventory valuation, stock-based compensation, income taxes, legal and other contingencies and corporate bonus accruals.

Revenue Recognition

We frequently enter into sales arrangements with customers that contain multiple elements or deliverables such as hardware, software and services. In order to comply with GAAP, we have to make a number of reasoned judgments with respect to elements of these sales arrangements, including how to allocate the proceeds received from an arrangement, whether there are multiple elements of the arrangement, whether any undelivered elements are essential to the functionality of the delivered elements and the appropriate timing of revenue recognition with respect to these arrangements. For revenue arrangements with multiple elements which were entered into by June 30, 2010 and which have not subsequently been materially modified, we allocate arrangement consideration to each element based upon vendor specific objective evidence, or VSOE, of fair value of the respective elements. VSOE of fair value for each element is based upon our historical standard rates charged for the product or service when such product or service is sold separately or based upon the price established by our management-comprised pricing committee, which has the relevant authority when that product or service is not yet sold separately. Changes to the elements in an arrangement and the ability to establish VSOE of the fair value for those elements could affect the timing and the amount of revenue recognition.

In the first quarter of fiscal 2011, we adopted Accounting Standards Update, or ASU, 2009-13, *Multiple-Deliverable Revenue Arrangements*, (amendments to Accounting Standards Codification, or ASC, Topic 605, *Revenue Recognition*), or ASU 2009-13, (formerly Emerging Issues Task Force, or EITF, Issue 08-1) and ASU 2009-14, *Certain Arrangements That Include Software Elements*, (amendments to Financial Accounting Standards Board, or FASB, ASC Topic 985, *Software*), or ASU 2009-14, (formerly EITF 09-3). The new standard changes the requirements for establishing separate units of accounting in a multiple element arrangement and requires the allocation of arrangement consideration to each deliverable to be based on the relative selling price. The FASB also amended the accounting standards for revenue recognition to exclude software that is contained in a tangible product from the scope of software revenue guidance if the software is essential to the tangible product's functionality. We adopted these new standards on a prospective basis; therefore, they apply only to revenue arrangements entered into or materially modified beginning July 1, 2010. The revised guidance primarily provides two significant changes: 1) it requires us to allocate revenues in an arrangement using best estimated selling prices, or BEASP, of deliverables if we do not have VSOE or third-party evidence, or TPE, of selling price; and 2) it eliminates the residual method and requires us to allocate revenue using the relative selling price method. The BEASP is established considering multiple factors including, but not limited to, pricing practices, internal costs, geographies and gross margin. The determination of BEASP is made through consultation with and formal approval by our pricing committee, taking into consideration the overall go-to-market pricing strategy. We may modify or develop new go-to-market practices in the future. As these go-to-market strategies evolve, we may modify our pricing practices in the future, which may result in changes in selling prices, impacting both VSOE and BEASP. These factors may result in a different allocation of revenue to the deliverables in multiple element arrangements from the

current fiscal year, which may change the pattern and timing of revenue recognition for these elements but will not change the total revenue recognized for the arrangement.

Revenue recognition also depends on all or a combination of the timing of shipment, completion of installation, customer acceptance and the readiness of customers' facilities. If shipments are not made on scheduled timelines, installation schedules are delayed or if the products are not accepted by the customer in a timely manner, our reported revenues may differ materially from expectations. For example, if a CyberKnife system were sold for \$4 million and the sale involved multiple elements including training and service, a 5% change in BESSP of the system could result in an increase or a decrease of approximately \$25,000 in the amount of revenue allocated and recognized as product revenue rather than as service revenue.

Inventories

The valuation of inventory requires us to estimate obsolete or excess inventory as well as damaged inventory. The determination of obsolete or excess inventory requires us to estimate the future demand for our products. We regularly review inventory quantities on hand and adjust for excess and obsolete inventory based primarily on historical usage rates and our estimates of product demand to support future sales and service. If our demand forecast for specific products is greater than actual demand and we fail to reduce purchasing and manufacturing output accordingly, we could be required to write off inventory, which would negatively impact our gross margin. For example, if the actual amount of inventory that is disposed of as obsolete, excess or damaged is 10% larger or smaller than the amount that we estimated at June 30, 2010, then we would need to increase or decrease cost of sales by approximately \$250,000.

Stock-Based Compensation Expense

We use the Black-Scholes option valuation model to estimate the fair value of stock options and Employee Stock Purchase Plan shares. The Black-Scholes model requires the input of highly subjective assumptions. The most significant assumptions are our estimates of the expected volatility and the expected term of the award. Our expected volatility is derived from the historical volatilities of several unrelated public companies within industries related to our business because we do not have sufficient trading history on our common stock. When making the selections of our peer companies within industries related to our business to be used in the volatility calculation, we also considered the stage of development, size and financial leverage of potential comparable companies. In addition, as our historical share option exercise experience does not provide a reasonable basis upon which to estimate the expected term, we estimate the expected term of options granted by taking the average of the vesting term and the contractual term of the option, as illustrated by the simplified method. The assumptions used in calculating the fair value of share-based payment awards represent management's best estimates, but these estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and we use different assumptions, our stock-based compensation expense could be materially different in the future.

We recognize compensation cost for only those shares expected to vest over the requisite service period of the award. We estimate our forfeiture rate based on an analysis of our actual forfeitures and will continue to evaluate the appropriateness of the forfeiture rate based on recent forfeiture activity and expected future employee turnover. Quarterly changes in the estimated forfeiture rate can have a significant effect on reported stock-based compensation expense, as the cumulative effect of adjusting the rate for all expense

amortization is recognized in the period the forfeiture estimate is changed. If a revised forfeiture rate is higher than the previously estimated forfeiture rate, an adjustment is made that will result in a decrease to the stock-based compensation expense recognized in the consolidated financial statements. If a revised forfeiture rate is lower than the previously estimated forfeiture rate, an adjustment is made that will result in an increase to the stock-based compensation expense recognized in the consolidated financial statements. For example, a change to our estimated forfeiture rate by 5% would result in an increase or decrease in overall stock-based compensation expense in a fiscal year by approximately \$1.2 million.

Income Taxes

We calculate our current and deferred tax provisions based on estimates and assumptions that could differ from the actual results reflected in our income tax returns filed during the subsequent year. We record adjustments based on filed returns when we have identified and finalized them, which is generally in the third quarter of the subsequent year for U.S. federal and state provisions, respectively.

We have placed a full valuation allowance on all net U.S. deferred tax assets because realization of these tax benefits through future taxable income cannot be reasonably assured. We intend to maintain the valuation allowance until sufficient positive evidence exists to support the reversal of the valuation allowance. Any decision to reverse part or all of the valuation allowance would be based on our estimate of future profitability. If our estimate were to be wrong we could be required to charge potentially significant amounts to income tax expense to establish a new valuation allowance.

Our effective tax rate includes the impact of certain undistributed foreign earnings for which we have not provided U.S. taxes because we plan to reinvest such earnings indefinitely outside the United States. We plan foreign earnings remittance amounts based on projected cash flow needs as well as the working capital and long-term investment requirements of our foreign subsidiaries and our domestic operations. Material changes in our estimates of cash, working capital and long-term investment requirements in the various jurisdictions in which we do business could impact our effective tax rate.

We are subject to income taxes in the United States and certain foreign countries, and we are subject to corporate income tax audits in some of these jurisdictions. We believe that our tax return positions are fully supported, but tax authorities are likely to challenge certain positions, which may not be fully sustained. However, our income tax expense includes amounts intended to satisfy income tax assessments that result from these challenges. Determining the income tax expense for these potential assessments and recording the related assets and liabilities requires management judgments and estimates. We evaluate our uncertain tax positions in accordance with the guidance for accounting for uncertainty in income taxes. We believe that our reserve for uncertain tax positions is adequate. We review our reserves quarterly, and we may adjust such reserves because of proposed assessments by tax authorities, changes in facts and circumstances, issuance of new regulations or new case law, previously unavailable information obtained during the

course of an examination, negotiations between tax authorities of different countries concerning our transfer prices, or the expiration of statutes of limitations.

Loss Contingencies

As discussed in Part I, Item 3 of this Form 10-K under the heading "Legal Proceedings" and in Note 8 "Commitments and Contingencies" in Notes to Consolidated Financial Statements, we are involved in various lawsuits, claims and proceedings that arise in the ordinary course of business. We record a provision for a liability when we believe that it is both probable that a liability has been incurred and the amount can be reasonably estimated. Significant judgment is required to determine both probability and the estimated amount. We review these provisions at least quarterly and adjust these provisions to reflect the impact of negotiations, settlements, rulings, advice of legal counsel, and updated information. Currently, we do not have a potential liability related to any current legal proceedings and claims that would individually or in the aggregate materially adversely affect our financial condition or operating results. Litigation is inherently unpredictable and is subject to significant uncertainties, some of which are beyond our control. Should any of these estimates and assumptions change or prove to have been incorrect, we could incur significant charges related to legal matters which could have a material impact on our results of operations, financial position and cash flows.

Corporate Bonus Expense and Accruals

We record accruals for estimated corporate bonus expense which is paid out in the first quarter of the subsequent fiscal year. Our expense accruals are based on our forecasted results for three factors: net revenue, pre-tax operating income and orders to backlog. If we underestimate or overestimate any of these factors during a fiscal year, adjustments to bonus expense and accruals may be necessary in subsequent periods during the year. For example, if our actual results as of the end of a fiscal year yielded a bonus attainment that varied by 5% from our prior estimate, we would need to increase or decrease our bonus expense accrual in the fourth quarter of the fiscal year by approximately \$230,000. Historically, our estimated accrued liabilities have approximated actual expense incurred.

Item 9A. Controls and Procedures, Page 107

5. *In your future filings, please disclose any changes in your internal control over financial reporting identified in connection with the evaluation of your internal control over financial reporting described in this section that occurred during your last fiscal quarter (your fourth fiscal quarter in the case of your annual report) that have materially affected, or are reasonably likely to materially affect, your internal control over financial reporting. Refer to Item 308(c) of Regulation S-K.*

Response:

We acknowledge the Staff's request, and our future filings will disclose any changes in our internal control over financial reporting identified in connection with the evaluation of our internal control over financial reporting that occurred during our last fiscal quarter (the fourth

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quarter in the case of our annual report) that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

In addition, we note that our 10-Q for the quarter ended September 30, 2010, filed on November 8, 2010, included the following disclosure:

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of any changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the three months ended September 30, 2010. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that there has not been any change in our internal control over financial reporting during the three months ended September 30, 2010 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 11. Executive Compensation, page 109

6. *We refer to your disclosure in the second paragraph of "Annual Cash Incentives" on page 24 of your proxy statement, which you have incorporated by reference. Please revise your future filings to explain the specific elements considered by your Compensation Committee in setting the target award opportunity percentages for each of your named executive officers and to explain why these percentages varied among the named executive officers.*

Response:

We acknowledge the Staff's request regarding our target award opportunity disclosure. As we discussed with the Staff, accordingly, Accuray's future executive compensation disclosure will include an explanation of the specific elements considered by our Compensation Committee in setting the target award opportunity percentages for each of our named executive officers, as well as an explanation why these percentages vary among the named executive officers, if applicable.

7. *We refer to your disclosure under "Fiscal 2010 Equity Awards" on pages 28 through 29 of your proxy statement which you have incorporated by reference. Please revise your future filings as applicable to provide substantive analysis and insight into how your Compensation Committee made its stock option grant determinations with respect to each named executive officer. Refer to Regulation S-K Item 402(b)(1)(iii) and (v). For example, please discuss and analyze how you determined the actual number of shares underlying the stock options that were awarded to your named executive officers and how and why those awards varied among the named executive officers. Please also indicate whether annual equity awards were in the approximate range of the 50th and 60th percentile; explain any material deviation from the percentile range; and specify how the*

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committee considered elements of individual and corporate performance, total compensation package, accumulated equity holdings, the nature of the position, and retention needs in reaching its determination for each named executive officer.

Response:

We acknowledge the Staff's request regarding our equity award disclosure. As we discussed with the Staff, accordingly, our executive compensation disclosure in our future filings will include substantive analysis and insight into how our Compensation Committee made its stock option grant determinations with respect to each named executive officer. This analysis will include a discussion of how the committee determined the actual number of shares underlying the equity awards that were awarded to our named executive officers and how and why those awards varied among the named executive officers. We will also indicate whether annual equity awards were in the approximate range of the 50th to 60th percentile of our relevant market data, explain any material deviation from the percentile range, and specify how the committee considered elements of individual and corporate performance, total compensation package, accumulated equity holdings, the nature of the position, and retention needs in reaching its determination for each named executive officer.

8. We note that your disclosure in the "Grant of Plan-Based Awards for Fiscal 2010" on page 39 of your proxy statement, which you have incorporated by reference, does not reflect the minimum threshold amounts or percentages included in your disclosure on pages 25 and 27. Please revise future filings to reflect threshold estimated future payouts under non-equity incentive plan awards.

Response:

We acknowledge the Staff's request regarding disclosure of threshold estimated future payout amounts under non-equity incentive plan awards in the Grant of Plan Based Awards table. Accordingly, as we discussed with the Staff, our future filings will include such disclosure.

9. We note that you have requested confidential treatment for certain portions of Exhibit 10.22 to your Form 10-K. Please submit an application for confidential treatment for the information you have redacted from that exhibit and clear any comments that we may issue on that application.

Response:

We respectfully advise the Staff that we requested confidential treatment of certain portions of Exhibit 10.22 to the Form 10-K when it was initially filed, as Exhibit 10.51 to our Form 10-K for the year ended June 30, 2007. The Staff granted the requested confidential treatment in an order dated January 28, 2008, a copy of which we have attached as Appendix A.

Additionally, in response to your request, we acknowledge that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you should have any further questions or comments, please direct these to me at 408-716-4648. In addition, we would request that you provide a facsimile of any additional comments that you may have to my attention at 408-789-4205. Thank you for your assistance.

Sincerely,

/s/ Darren J. Milliken
Darren J. Milliken

Senior Vice President, General
Counsel & Corporate Secretary
Accuray Incorporated

cc: Euan S. Thomson, Ph.D., President and Chief Executive Officer, Accuray Incorporated
Page Mailliard, Wilson Sonsini Goodrich & Rosati, P.C.

Appendix A

ORDER GRANTING CONFIDENTIAL TREATMENT

DATED JANUARY 28, 2008

(see attached)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

January 28, 2008

ORDER GRANTING CONFIDENTIAL TREATMENT
UNDER THE SECURITIES EXCHANGE ACT OF 1934

Accuray Incorporated
File No. 1-33301 - CF#20875

Accuray Incorporated submitted an application under rule 24b-2 requesting confidential treatment for information it excluded from the Exhibit to a Form 10-K filed on September 4, 2007.

Based on representations by Accuray Incorporated that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibit will not be released to the public for the time periods specified:

Exhibit 10.50	through April 3, 2010
Exhibit 10.51	through August 31, 2012

For the Commission:

/s/ Nancy M. Morris

Nancy M. Morris
Secretary
