

(Full title of the plan)

Varian Medical Systems, Inc.

(Name of issuer of the securities held pursuant to the plan)

3100 Hansen Way

Palo Alto, California 94304-1129

(Address of principal executive offices)

VARIAN MEDICAL SYSTEMS, INC.
RETIREMENT PLAN PENSION ELEMENT

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Report of Independent Registered Public Accounting Firm

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To the Participants and Retirement Committee of Varian Medical Systems, Inc.
Retirement Plan Pension Element

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of Varian Medical Systems, Inc. Retirement Plan Pension Element (the Plan) at January 2, 2003 and December 31, 2002 and the changes in net assets available for benefits for the two days ended January 2, 2003 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan s management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/PricewaterhouseCoopers LLP

May 28, 2004

Varian Medical Systems, Inc. Retirement Plan - Pension Element

Statements of Net Assets Available For Benefits

(in thousands)	January 2, 2003	December 31, 2002
Interest in the Varian Associates, Inc. Retirement and Profit Sharing Program Trust (Note 4)	\$	\$ 191,789
Net assets available for benefits	\$	\$ 191,789

The accompanying notes are an integral part of these financial statements.

Varian Medical Systems, Inc. Retirement Plan - Pension Element

Statements of Changes In Net Assets Available For Benefits

(in thousands)	For the Two Days Ended January 2, 2003
Additions to net assets attributed to	
Interest in Varian Associates, Inc. Retirement and Profit Sharing Program Trust investment income	\$ 2,377
Net increase in net assets prior to transfer to Profit Sharing Element	2,377
Transfer of assets to Profit Sharing Element	(194,166)
Net decrease in net assets	(191,789)
Net assets available for benefits:	
Beginning of period	191,789
End of period	\$ -

The accompanying notes are an integral part of these financial statements.

Varian Medical Systems, Inc. Retirement Plan - Pension Element

Notes to Financial Statements

1. Description of the Plan

The following brief description of the Varian Medical Systems, Inc. Retirement Plan (the Plan) is provided for general information purposes only. Participants should refer to the Plan and the Summary Plan Description/Prospectus document for more detailed information.

The Plan was established to provide benefits to those employees of Varian Medical Systems, Inc., formerly Varian Associates, Inc. (the Company) who elect to participate. In 2002, there existed two distinct defined contribution plan elements, the Varian Medical Systems, Inc. Retirement Plan - Pension Element (Pension Element) and the Varian Medical Systems, Inc. Retirement Plan - Profit Sharing Element (Profit Sharing Element). Effective as of December 31, 2002, the Pension Element merged into the Profit Sharing Element and assets of approximately \$194,166,000 were transferred from the Pension Element to the Profit Sharing Element on January 2, 2003 (the Merger). In December 2002, the Plan was amended to adopt the necessary changes for the Economic Growth and Tax Relief and Reconciliation Act of 2001 (EGTRRA) to change the Plan year-end from September 30 to December 31. The Plan is intended to comply with the applicable requirements of the Internal Revenue Code (IRC) and the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), as amended. Contributions can come from participant before-tax contributions, participant after-tax contributions, Employee Incentive Plan (EIP) bonus contributions, Management Incentive Plan (MIP) bonus contributions, rollover contributions, Company matching contributions, matching EIP bonus contributions, matching MIP bonus contributions and discretionary Company contributions. Employees are eligible to join the Plan immediately after they are hired by the Company.

Administration

The Company is the designated administrator of the Plan. The Company has contracted with Fidelity Institutional Retirement Services Company (Fidelity) to maintain the Plan's individual participant accounts and with Fidelity Management Trust Company (Fidelity Trust) to act as the custodian and trustee. The Company currently pays certain administrative expenses on behalf of the Plan, except for loan fees paid by Plan participants who elect to receive a Plan loan. Brokerage commissions and other charges incurred in connection with investment transactions are paid from Plan assets. Prior to January 2, 2003, the investments of the Profit Sharing Element and the Pension Element were maintained in the Varian Associates, Inc. Retirement and Profit Sharing Program Trust (Master Trust), a trust established pursuant to a trust agreement between the Company and Fidelity Trust. Concurrent with the Merger on January 2, 2003, the Master Trust was dissolved and all assets are held by the Plan.

Contributions and Participants Accounts

Participants in the Plan may make a minimum contribution of 1% of their base pay (as defined) up to a maximum of 15% of their base pay, subject to statutory annual limitations. Employees of the Company may elect to have their EIP bonus paid out in cash or deposited directly to their Plan accounts in 10% increments, subject to statutory annual limitations. All participant contributions may be made on either a before-tax or after-tax basis and are subject to statutory annual limitations and Plan rules. New Plan participants must complete one year of service before making any after-tax contributions to the Plan.

Upon completion of one year of service with the Company, participants are entitled to receive Company contributions. The Company's matching contribution is 100% of participants' before or after tax deposits, up to a maximum of 6% of participants' eligible base pay. Contributions for Company EIP matching contributions are 6% of participants' EIP allocations. The Company may make a discretionary retirement profit-sharing contribution to the Profit Sharing Element for participants who have completed one year of service and were employed on the last day of the fiscal year or died during the fiscal year. Participants' portions of the Company's retirement profit-sharing contributions are based on the percentages of their eligible base salary to the total eligible base pay for all participants during the Profit Sharing Element year. No discretionary Company retirement profit-sharing contributions were made for the two days ended January 2, 2003.

Each participant's account is credited with the participant's contributions and allocations of the Company's contributions and Plan earnings and charged with an allocation of certain administrative expenses. Allocations are based on participant earnings or account balances, as defined.

Participants are immediately fully vested in their contributions and Company contributions.

Contributions made to the Plan are allocated among twenty-two investment funds, including the Varian Medical Systems Stock Fund, offered by the Plan in 1% increments according to the participant's direction. Participants may transfer account balances and the investment of their future contributions among these funds.

Participant Loans

Loans are available to participants who are either active employees or on a leave of absence. Participants are eligible to request a loan from the Plan ranging from \$1,000 to the lesser of 50% of the participant's Plan assets or \$50,000. Loan balances are also subject to certain other limitations as provided by the Plan. Loan balances are collateralized by the balance in the participant's account and bear interest at a fixed rate of prime plus 1% at the date requested. The interest rates on loans outstanding at December 31, 2002 range from 5.25% to 10.5%, respectively. Principal and interest are paid ratably through payroll deductions over five years or less. Upon employment termination, the entire loan balance becomes immediately due and payable.

Payment of Benefits

Upon termination of service on account of death, disability or retirement, a participant or beneficiary may elect to receive either a lump sum amount equal to the value of their account or annual installments over a period of years.

Hardship Distributions

Participants are allowed to withdraw funds from the Plan in case of hardship. Withdrawals may be made no more than once a month and must be at least \$500 (or such lesser amount as is available for withdrawal).

Withdrawals are subject to restrictions as to amount, frequency and intended use of the proceeds. The normal form of payment is cash.

Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA.

2. Summary of Significant Accounting Policies

Basis of Accounting

The financial statements of the Pension Element are prepared utilizing the accrual basis of accounting.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the administrator and trustee to make estimates and assumptions that affect the reported amounts of assets and liabilities in the financial statements. Such estimates include those regarding fair value. Actual results may differ from those estimates.

Risks and Uncertainties

The Plan provides participants with various investment options in mutual funds which are invested in a combination of stocks, bonds, fixed income securities and other investment securities. Investment securities are exposed to various risks, such as those associated with interest rates, market conditions and credit worthiness of the securities issuers. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in risks in the near term could materially affect participants' account balances and the amounts reported in the financial statements.

Investments

Investments of the Plan are held by Fidelity Trust and are invested in the investment options available in the Plan based solely upon instructions received from Plan participants.

Investments of the Master Trust held in money market and mutual funds are valued at fair value as determined by quoted market prices. Investments of the Master Trust held in the Interest Income Fund and the Varian Medical Systems Stock Fund are stated at net asset value, as determined by the investment manager, based on the fair value of the underlying securities. The carrying amounts of the investments approximate fair value. Purchases and sales of securities held in the Master Trust are recorded on a trade-date basis. Participant loans are valued at cost which approximate fair value. The Master Trust presents in its investment income (loss) the net appreciation (depreciation) in the fair value of its investments, which consists of the realized gains or losses and the unrealized appreciation (depreciation) on these investments.

Payment of Benefits

Benefits are recorded when paid.

3. Income Taxes

The Pension Element obtained its current determination letter on December 4, 2001, in which the Internal Revenue Service stated that the Pension Element design is in compliance with the applicable requirements of the IRC. The Pension Element has been subsequently amended; however, the Company believes that the Pension Element is designed and is currently being operated in compliance with the applicable requirements of the IRC and that the Master Trust, which forms a part of the Plan, is exempt from tax. Therefore, no provision for income taxes has been included in the Pension Element's financial statements.

4. Investment in the Varian Associates, Inc. Retirement and Profit Sharing Program Trust

The Pension Element's investments are in the Master Trust which was established for the investment of assets of the Pension Element and the Profit Sharing Element. Each participating element has a specific interest in the Master Trust. Investment income and administrative expenses relating to the Master Trust are allocated to the individual elements based upon participant balances.

A summary of the net assets available for benefits of the Master Trust and significant Master Trust investments at January 2, 2003 and December 31, 2002 is as follows:

STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS AT JANUARY 2, 2003 AND DECEMBER 31, 2002

(in thousands)	January 2, 2003			December 31, 2002		
	Pension Element	Profit Sharing Element	Total	Pension Element	Profit Sharing Element	Total
Assets						
Master Trust investments:						
Mutual funds	\$	\$ 375,129	\$ 375,129	\$ 169,135	\$ 200,168	\$ 369,303
Money market funds		43,922	43,922	19,833	24,089	43,922
Stock fund		6,758	6,758	2,473	4,171	6,644
Participant loans		2,011	2,011	75	1,936	2,011
Total Master Trust investments		427,820	427,820	191,516	230,364	421,880
Receivables:						
Company contributions		254	254	254		254
Participant contributions		497	497	35	462	497
Total receivables		751	751	289	462	751
Total assets		428,571	428,571	191,805	230,826	422,631
Liabilities						
Accrued expenses		(35)	(35)	(16)	(19)	(35)
Total liabilities		(35)	(35)	(16)	(19)	(35)
Net assets available for benefits						
Element's participating interest	\$	\$ 428,536	\$ 428,536	\$ 191,789	\$ 230,807	\$ 422,596
		0%	100%	100%	45%	55%
						100%

Investment income for the Master Trust is as follows:

(in thousands)	For the Two Days Ended January 2, 2003		
	Pension Element	Profit Sharing Element	Total
Net appreciation (depreciation) in fair value of investments:			
Mutual funds	\$ 2,333	\$ 3,491	\$ 5,824
Stock fund	42	72	114
	2,375	3,563	5,938
Interest	2		2
Total	\$ 2,377	\$ 3,563	\$ 5,940

Master Trust investments in excess of 5% of net assets were as follows:

(in thousands)	January 2, 2003	December 31, 2002
Fidelity Growth Company Fund	\$ 69,764	\$ 68,137
Fidelity Growth and Income Portfolio	\$ 53,381	\$ 56,867
Fidelity Balanced Fund	\$ 52,856	\$ 32,274
Fidelity Retirement Money Market Portfolio	\$ 43,487	\$ 43,923
Spartan U.S. Equity Index Portfolio	\$ 51,984	\$ 50,417
Interest Income Fund	\$ 119,558	\$ 120,454

5. Party-In-Interest and Related Party Transactions

As allowed by the Plan, participants may elect to invest up to 25% of their contributions in the Varian Medical Systems Stock Fund. The Pension Elements Share of investments in the Company's common stock at December 31, 2002 consisted of 121,427 shares with a fair market value of \$2,413,000. The Varian Medical Systems Stock Fund invests primarily in the Company's common stock. The remainder of the Varian Medical Systems Stock fund, approximately \$60,000 at December 31, 2002, is invested in the Fidelity Institutional Cash Portfolio Money Market to allow for timely handling of exchanges, withdrawals and distributions.

Certain Master Trust investments are shares of mutual funds managed by an affiliate of Fidelity, and therefore these transactions qualify as party-in-interest. Any purchases and sales of these funds are open market transactions at fair market value. Consequently, such transactions are permitted under the provisions of the Plan and are exempt from the prohibition of party-in-interest transactions under ERISA.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustee (or other persons who administer the employee benefit plan) has duly caused this annual report to be signed by the undersigned, thereunto duly authorized.

VARIAN MEDICAL SYSTEMS INC.
RETIREMENT PLAN

By: Varian Medical Systems, Inc.

By: /s/ Wendy S. Reitherman
Wendy S. Reitherman
Vice President, Human Resources

Date: July 12, 2004

EXHIBIT INDEX

Number	Description
23.1	Consent of Independent Registered Public Accounting Firm