
Anticipated acquisition by Elekta AB of Nucletron BV

ME/5118/11

The OFT's decision on reference under section 33(1) given on 13 September 2011. Full text of decision published 6 October 2011.

Please note that the square brackets indicate figures or text which have been deleted or replaced in ranges at the request of the parties or third parties for reasons of commercial confidentiality.

PARTIES

1. **Elekta AB** (Elekta) is a Swedish medical device company that develops and supplies treatment systems for cancer and brain disorders. Listed on the Nordic Exchange it has world-wide operations.
2. **Nucletron B.V.** (Nucletron) is a developer, manufacturer and provider of cancer care treatments and solutions. It offers a range of products covering imaging, treatment planning and treatment delivery, focussing on brachytherapy. Its corporate headquarters are located in the Netherlands and it has offices in 16 countries world-wide. In the 2010 financial year its UK turnover was approximately £[] million.

TRANSACTION

3. Elekta intends to acquire the entire share capital of Nucletron through the acquisition of all issued and outstanding shares in New Nucletron Company B.V. and New Isodose Company B.V..
4. The parties notified the OFT of the proposed merger on 22 July 2011 and the administrative deadline for a decision is therefore 19 September 2011. The transaction was also notified in Germany and Portugal.

JURISDICTION

5. As a result of this transaction Elekta and Nucletron will cease to be distinct. The parties overlap in the supply of External Beam Treatment Planning Systems (EBTPS) with a combined share of the installed base of some [35–45] per cent, increment [15 – 25] per cent; therefore the share of supply test in section 23 of the Enterprise Act 2002 (the Act) is met. The OFT therefore believes that it is or may be the case that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

MARKET DEFINITION

Product scope

6. Both parties manufacture and supply radiation therapy related products, which are mainly sold to hospitals and treatment centres.
7. Radiation therapy is the medical use of ionizing radiation as a part of cancer treatment in order to control malignant cells. On average some 50 to 60 per cent of all cancer patients will receive radiation therapy.
8. There are three main types¹ of radiation therapy:
 - **External beam radiation therapy (EBRT)**, which involves radiation being directed at the tumour from outside the body. It is the most common form of radiation therapy and is typically administered on an outpatient basis. It is used to treat most types of cancer.²
 - **Brachytherapy** involves radio-active isotopes being placed inside or next to the area requiring treatment by way of an implant, which is put directly into the body. It is commonly used to treat cervical, breast, prostate and skin cancers. Although

¹ The difference relates to the position of the radiation source.

² Including cancers of the bladder, brain, breast, cervix, larynx, lung, prostate, and vagina.

brachytherapy currently represents around 10 per cent of all radiation therapies, it is considered to be a very precise method, and is at the forefront for treatments of prostate, breast and genealogical cancers and its use is expected to grow in relation to other types of cancer.

- **Systemic radioisotope therapy** involves radioactive materials being administered by infusion or orally. It is sometimes used to treat cancer of the thyroid and adult non-Hodgkin lymphoma.
9. Radiation therapy equipment will be specifically developed for only one of these three types of radiation therapy; the equipment is not multi-purpose. Further, various factors, for example the type of cancer, location, and patient's general health, will determine which of these three types of therapy will be most suitable for an individual patient. As a result, the different types of radiation therapy equipment are not demand-side substitutes.
10. Similarly, on the supply-side, due to the nature of each type of treatment, radiation therapy products will have specific technologies; for example:
- EBRT require linear accelerators (linacs), a type of particle accelerator that increases the speed of subatomic particles or ions
 - brachytherapy uses solid radioactive material that is applied to or inserted in the body, and
 - systemic radiation therapy uses radioactive material which can circulate freely in the body.
11. Radiation therapy delivery systems, therefore, cannot be designed for use across the three types of radiation therapy; that is, they are not substitutes on the supply-side either.³ This view was supported by third parties.

³ See Merger Assessment Guidelines, paragraph 5.2.17, first bullet.

12. Elekta and Nucletron both manufacture and supply radiation therapy treatment delivery systems. However, each is active in respect of a different type of radiation therapy. Elekta supplies only EBRT treatment delivery systems. Nucletron supplies only brachytherapy treatment delivery systems. There is therefore, no overlap in the treatment delivery systems produced by the parties.
13. However, the parties do overlap in the supply of treatment planning systems for EBRT and Nucletron also supplies treatment planning systems for brachytherapy. Market definition for treatment planning is considered below.

Treatment Planning

14. Radiation treatment planning is the process by which a team of medical personnel plan the EBRT or brachytherapy treatment for an individual patient.
15. The planning process involves using detailed imaging scans to identify the location of a patient's tumour and to assess the tissues and organs around it. The oncologist then determines the area that will be treated, the total radiation dose to be delivered to the tumour, the dosage permitted for the area around the tumour and the safest angles and paths for radiation delivery. The exact radiation plan will then be designed on sophisticated computers.
16. Treatment planning systems are designed to be specific to one form of radiation therapy. Third parties told the OFT that EBRT and brachytherapy each have their own treatment planning systems, which are not substitutable for each other on the demand side.⁴
17. Within EBRT there are different types of delivery system, and the external beam treatment planning systems (EBTPS) will typically consist of a basic platform which can then be added to by modules aimed at supporting either a specific part of the planning process or a specific type of EBRT.

⁴ Although a third party noted that Nucletron's Oncentra Masterplan treatment planning system has platforms for both EBRT and brachytherapy.

18. This means that there is more than one type of external beam treatment planning product. Specifically,
- main platforms that will include most modules required for standard external beam radiation therapy planning
 - modules that can be added to an existing platform to support a specific part of the planning process or a specific treatment protocol, either included in a new platform or sold as stand-alone products for addition to an existing platform, and
 - separate platforms that only support a particular external beam treatment delivery protocol, and which are not capable of supporting all EBRT treatment protocols performed by a treatment centre. These are sold as stand-alone products and will include all processes involved in the planning.

EBRT planning systems

19. Given that market definition properly begins with the narrowest plausible candidate market in which the parties overlap,⁵ the OFT has therefore considered whether the relevant market may be narrower than all EBTPSs.
20. The parties submitted that each of these systems and modules can be regarded as being part of the same product market as all are designed to meet a treatment centre's EBRT planning needs. Since all EBTPS must support the various aspects of the treatment planning process, regardless of the treatment protocol that the system is for, they can be considered to be supply side substitutes. As a result customers would typically make two types of EBTPS purchase: the purchase of an initial package that consists of a basic external beam treatment planning platform with certain modules; and add on purchases of additional modules, or new software licences.
21. The parties stated that once a customer has made the choice of an EBTPS any additional modules have to be complimentary and

⁵ See Merger Assessment Guidelines, paragraph 5.2.11.

operable with it. Therefore, the parties argue, competition will take place at the point that a customer selects its EBTPS, since a different EBTPS supplier cannot supply, and therefore cannot compete, through add-on sales to EBTPS customers of another supplier. Third parties all commented that it was only possible to buy additional modules for an existing EBTPS from the original supplier.

22. The parties also submitted, and third parties agreed, that there is no separate economic market for maintenance and support of EBTPS, as all maintenance and support will be carried out by the manufacturer that supplied the original EBTPS. There are no independent third parties offering such services and suppliers do not service one another's products.
23. Treatment planning systems are designed to be specific to one form of radiation therapy. Customers seeking a planning system for an EBRT delivery system can only purchase an EBTPS. Once the Planning system has been purchased, additional modules and updates can only be supplied by the original supplier and competitors do not provide support for one another's software. For these reasons, the OFT considers the appropriate product frame to be the supply of EBTPS.

Geographic scope

24. The parties have submitted that the supply of EBTPS is at least national, if not wider, in scope. This is because suppliers are active globally, delivering the same oncology solutions and technology to a number of countries world-wide. For example Elekta's research and development and production facility for its treatment planning products is predominately located in the USA, Nucletron's in Sweden, and those of competitors, Varian and Philips, in the USA. In the UK most companies have a subsidiary responsible for national sales.
25. Additionally, since radiation therapy is conducted in English throughout the world, there is no requirement for user interfaces to be translated into national languages and treatment centres are therefore able to buy product from suppliers based in any country.

Additionally, once an EBTPS is certified as a medical device within the meaning of Directive 93/43/EEC, it is capable of being freely supplied throughout the EU.

26. The parties have also stated that most software support can be provided online or through call centres, and installation and training can be carried out by experts that travel between countries.
27. Third parties agreed that suppliers were globally located, but commented that regulatory issues made supply to the UK difficult, although, as pointed out by the parties, if the supplier was already supplying to Europe this was not a problem. In addition the similarity between UK and EEA installed systems market shares set out in tables 1 and 2 below is consistent with the geographic market being EEA wide.
28. Although it has not been necessary to conclude on geographic scope, the OFT has taken a conservative approach and has assessed this case on the basis of a national market, albeit also considering EEA-wide shares.

HORIZONTAL ISSUES

29. The parties overlap in the supply of External Beam Treatment Planning Systems (EBTPS).
30. The parties provided market share data for the supply of EPTPS in the UK and the EEA. The OFT's investigation showed that the market is characterised by licensing agreements which after an initial one year term roll over, on an annual basis, for periods of over five years. The parties claim that an analysis of legacy market shares therefore does not necessarily provide an accurate view of the likely impact of the merger.
31. It should be noted that historically Elekta did not supply its own EBTPS and instead marketed those developed and manufactured by other companies such as Nucletron and Philips. Elekta purchased CMS in 2006 and started offering its own EBTPS in 2008. A concern was raised by a third party that there was a continuing relationship between Elekta and Philips with regards to joint

marketing and distribution of the Philips EBTPS. Elekta confirmed that there is no current arrangement between the firms and that, on the occasions where Elekta has recently supplied a Philips EBTPS alongside an Elekta delivery system in response to a tender for both delivery and planning systems, this was requested by the customer. Philips stated that [] to all delivery system suppliers competing for such combined tenders. The OFT's investigation also found that customers have experienced competition between Philips and Elekta for recent tenders and that they view the two as completely independent. The OFT has therefore analysed this merger from the position that Elekta and Philips are separate, competing suppliers of EBTPS.

Market shares of installed systems

32. The parties supplied the OFT with estimated shares of supply of installed systems, that is, existing business for EBTPS.⁶

Table 1: UK market shares of EBTPS installed systems 2010/11

Company	Market share, per cent
Elekta	[15 – 25]
Nucletron	[25 – 35]
Combined	[40 – 50]
Varian	[30 – 40]
Philips	[15 – 25]
Other	[0 – 10]
Total	100

Source: Parties' own estimates

⁶ It should be noted that in collating this data the parties have included all CMS installed systems as Elekta installed systems following the acquisition of CMS by Elekta in 2006.

Table 2: EEA market shares for EBTPS installed systems 2010

Company	Market share, per cent
Elekta	[]
Nucletron	[]
Combined	[]
Varian	[]
Philips	[]
Siemens	[]
Other	[]
Total	100

Source: Parties' own estimates

33. The OFT notes that within the UK pre merger, on this measure, Varian is the largest operator in the market with a [30–40] per cent market share, with Nucletron the second largest at [25–35] per cent, Philips the third largest with [15–25] per cent share, and Elekta the fourth largest with [15–25] per cent market share. These estimates were corroborated by third party estimates for installed systems market shares. The parties' combined UK share of [40–50] per cent is not low enough to rule out concerns over unilateral effects.
34. In this regard, and as noted at paragraph 30 above, the parties submitted that installed system market shares were not an accurate representation of competition. They explained that where a customer requires a new EBTPS or replacement of existing EBTPS, the customer invites tenders and generally awards a contract to the winning bidder for the licensing of the software on a rolling basis which is generally retained for a period of over five years. Once the contract has been awarded, the opportunity for further competition for services in relation to that customer is very limited until the contract is put out to tender again.
35. The OFT has seen no evidence pointing towards any competitive interaction once a licensing agreement has been awarded. Further, given the general practice of rolling over contracts for over five years, the OFT considers it likely that market shares estimated on an installed system basis may give a distorted picture of competition. In addition, the OFT is of the view that issues relating to possible incumbency advantage are captured in the set of data based on winners of new businesses. Therefore, the OFT considers

that in this instance it is appropriate to place more weight on competition for new contracts/business in order to assess the level of competition between the parties and their competitors for the supply of EBTPS. This approach is consistent with that taken by the CC and OFT in previous cases.⁷

36. For this reason, the OFT has examined data on new business won below.

New businesses

37. The parties submitted evidence of tenders won which included EBTPS from 2006/07 to 2010/11,⁸ the OFT considers this a long enough period to constitute a representative sample in this case. The parties argue that tenders for a combined EBRT treatment delivery system and planning system should not be included in this data as the cost differential between delivery system and planning system means the delivery system manufacturer takes the lead in winning these contracts and will integrate an EBTPS with their delivery system offer; put differently, that competition in combined tenders takes place on the delivery system, not the planning system.
38. Set against this, however, the winning bids in a number of these 'combined' tenders included EBTPS from a supplier (such as Philips) that does not supply delivery systems. To the OFT, this points to competition for the EBTPS 'lot' within the wider contract. Consistent with this, the parties submit, and customers confirm, that in these cases customers will have a strong preference for a supplier of EBTPS and instruct bidders to include this EBTPS in their tender. The OFT believes that these tenders should therefore be included in any analysis of tenders won as this strong preference from customers reflects the incumbency advantage held by these suppliers.

⁷ Capita/IBS — www.competition-commission.gov.uk/rep_pub/reports/2009/547capita.htm and Idox/Lalpac — www.ofc.gov.uk/OFTwork/mergers/Mergers_Cases/2011/IDOX

⁸ It should be noted that in collating this data the parties have included all CMS wins as Elekta wins following the acquisition of CMS by Elekta in 2006.

39. In addition, as noted in paragraph 21, the parties submitted that there is no substantive competition for add-on sales after the initial purchase of an EBTPS. This was confirmed by both third party customers and competitors and as such these sales are not included in the analysis of competitive tenders won.⁹
40. The OFT has therefore reviewed the parties' evidence on tenders that were contestable by other suppliers, including those for combined delivery and planning systems but not those for add-on sales. Shares of these tenders won are given in Table 3.

Table 3: UK market shares based on tenders won including EBTPS from 2006/07 to 2010/11

Company	Number	Per cent
Elekta	[]	[15–25]
Nucletron	[]	[5–15]
Combined	[]	[25–35]
Varian	[]	[35–45]
Philips	[]	[25–35]
Other	[]	[0–10]
Total	[]	100

Source: Parties' own estimates

41. The OFT notes that within the UK, on this measure, Varian has won the greatest number of tenders at [35–45] per cent, with Philips the second largest at [25–35] per cent, Elekta the third largest with [15–25] per cent, and Nucletron the fourth largest with [five–15] per cent of tenders won. This would indicate that post merger the parties have a market share of new business of [25–35] per cent with a [five–15] per cent increment. These estimates were corroborated by third party estimates of tenders won from 2006-11. The parties' combined share and the increment to it are not at a level that would ordinarily give the OFT cause for concern over unilateral effects, unless the parties were closer competitors than these shares imply. This is examined below.

⁹ This is consistent with the add-on sales being a secondary product within a single system market whereby customers consider the price of both products (that is, the system) when making their initial purchase decision. See Merger Assessment Guidelines, paragraph 5.2.20.

Closeness of competition

42. With respect to the closeness of competition between them, the OFT analysed tenders that the merging parties bid for with a view to assessing the level of customer switching between them. Overall the parties competed directly on less than [20–30] per cent of tenders and on each occasion Philips, Varian, or both also bid. For those tenders on which the parties bid against each other, Philips won [] times, Varian [] times, and the merging parties won [].
43. The OFT was able to identify [] occasions on which a customer switched supplier away from an installed system of one of the merging parties. On [] of these [] occasions (less than [25–35] per cent) the customer switched from one merging party to the other. [] of these switching events were for tenders that included both EBRT delivery and planning where the customer switched from an installed EBTPS supplied by Nucletron, who does not offer an EBRT delivery system, to Elekta who offers both. On all [] of these occasions Nucletron did not compete for the tender, implying that the apparent level of switching between the parties was greatly overstated (as the switch was not on a like-for-like-business basis).

Conclusion

44. On the basis of the above, the OFT concludes that Elekta and Nucletron do not place a significant competitive constraint on each other. Third parties, with one exception,¹⁰ were unconcerned by the merger. Accordingly, the OFT does not consider that the merger gives rise to a realistic prospect of a substantial lessening of competition on the basis of unilateral effects in the market for the supply of EBTPS in the UK.

BARRIERS TO ENTRY AND EXPANSION

45. The parties submit that barriers to entry for EBTPS are moderate with contestable tenders infrequent and as such few opportunities for a new entrant to win business. However the parties point towards the recent entry of RaySearch as evidence that the barriers

¹⁰ These concerns are addressed at paragraph 29 above.

to entry are not insurmountable. RaySearch has previously developed modules for other EBTPS suppliers such as Nucletron and Varian and has recently started supplying its own complete EBTPS product.

46. Third party customers and competitors characterise barriers to entry as high, pointing to the need to have an established reputation for the accuracy of the product in this market, and the limited number of sales opportunities. A competitor also stated that it would not be easy for an international competitor to switch to supplying in the UK, due to regulatory issues and the necessary upfront investment in a sales and service organisation. However, customers stated that they would consider a tender from a new supplier as long as the criteria of the tender were met and in addition several third parties, both customers and competitors, referred to RaySearch as a credible new supplier.
47. However, as the merger raises no concerns, the OFT has not needed to conclude on whether entry and expansion in this market are timely, likely and sufficient to countervail any SLC.

THIRD PARTY VIEWS

48. Where relevant third party comments have been included above. At least one third party responded that the merger would enable Elekta to offer a greater range of products from a single supplier.
49. One third party was concerned because it considered that Elekta and Philips were not independent of each other and as such the merger would lead to only two suppliers in the market for EBTPS. As explained above at paragraph 31, Elekta stated they have no relationship and both Elekta and Philips provided evidence of them competing directly against each other; this was corroborated by several third party customers.

ASSESSMENT

50. The parties overlap in the supply of External Beam Treatment Planning Systems (EBTPS).

51. The OFT considers that the appropriate product frame of reference is the supply of EBTPS, since treatment planning systems are designed to be specific to one form of radiation therapy. Customers have confirmed that if seeking a planning system for an EBRT delivery system they can only purchase an EBTPS. Further, once the planning system has been purchased, additional modules and updates can only be supplied by the original supplier and competitors do not provide support for one another's software.
52. The parties argued that the geographic frame of reference is at least national if not wider in scope. While third parties agreed that suppliers are located globally, it was considered that regulatory issues made supply to the UK difficult. The similarity between UK and EEA installed systems market shares set out in tables 1 and 2 above is consistent with the geographic market being EEA wide.
53. Although it was not necessary to conclude on the geographic frame of reference, the OFT took a conservative approach and assessed this merger in terms of the supply of EBTPS in the UK.
54. The parties have a combined share of the installed base of EBTPS of [40–50] per cent with Varian and Philips having [30–40] per cent and [15–25] per cent respectively. However, the OFT has seen no evidence pointing towards any competitive interaction once a licensing agreement has been awarded and third parties confirmed that there is no substantive competition for add-on sales after the initial purchase of an EBTPS.
55. The OFT therefore considered the market for contestable tenders, that is, for new delivery systems that included an EBTPS, and for new planning systems. On this measure the parties combined shares are [25–35] per cent, increment [five – 15] per cent. From bidding data provided by the parties and a third party the OFT has concluded that the parties are not close competitors and do not place a significant competitive constraint on each other.
56. Third parties were largely unconcerned, with at least one third party responding that the merger would enable Elekta to offer a greater range of products from a single supplier. One third party was

concerned because it considered that Elekta and Philips were not independent of each other and as such the merger would lead to only two suppliers in the market for EBTPS. This issue is dismissed at paragraph 31 above.

57. Consequently, the OFT does not believe that it is or may be the case that the merger may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

DECISION

58. This merger will therefore **not be referred** to the Competition Commission under section 33(1) of the Act.