



2007-2008 Patient Survey

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EXECUTIVE SUMMARY

Introduction

In 1983 the Acoustic Neuroma Association (ANA) surveyed its 832 members by questionnaire, reporting on the experiences of the 541 responding members who had been treated for acoustic neuroma (AN). This information provided new insights into AN diagnosis and treatment in the United States. The 1983 results were published in a 1988 ANA patient information booklet, as well as a 1989 article in the medical journal, *The Laryngoscope*. In order to update and expand on that information, another member survey was designed and mailed to 2,372 patient-members of ANA in 1998. An article summarizing responses received from 1,940 members was published by ANA.

In a continuing effort to advance our understanding of acoustic neuromas, ANA has once again conducted a survey. The 2007-2008 survey was available online at www.ANAUSA.org from August 2007 – February 2008, and paper copies of the survey were made available to members without Internet access upon written request. An email notification of the online availability of the survey was sent to approximately 4,000 email addresses contained in the ANA database. 2,004 respondents completed the survey as of its close in February 2008¹.

Purpose

In keeping with the mission of ANA, the 2007-2008 survey was conducted to provide information regarding the symptoms, diagnosis, treatment and post-treatment issues experienced by AN patients. Although this information is self-reported and therefore could not be verified for accuracy, it is meant to provide a basic set of data for newly diagnosed, pre- and post-treatment AN patients who share a condition for which such data is currently lacking.

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Respondents

There are some similarities in the data collected in each of the three ANA surveys conducted to date. For the 2007-2008 survey the respondents to the survey were 62% female and 38% male, 63% of the respondents were between the ages of 41 and 60 and the tumor side was almost evenly distributed between the left and right sides. A significant difference in the data collected in the 2007-2008 survey versus prior surveys is that tumor size at initial diagnosis was smaller than in past surveys. The 2007-2008 survey showed 38% of respondents reporting they were initially diagnosed with small tumors versus 23% in 1998 and 17% in 1983. (Note: Small is reported in 2007-2008 as 1.5 cm or less; in 1998 as less than 1.5 cm and in 1983 as less than 2 cm.)

See Pages 12-15 of the 2007-2008 survey results for detailed information regarding respondents.

¹ Data reported excludes duplicate and erroneous entries that ANA was able to identify. There can be no guarantee that data included in the 2,004 completed responses are accurate and not duplicative or erroneous entries.

The table below illustrates the tumor size reported by respondents at the time of their diagnosis in each of the three surveys conducted to date by ANA:

2007-2008 Results		1998 Results		1983 Results	
1.5 cm or less	38%	Less than 1.5 cm	23%	Less than 2.0 cm	17%
1.6 - 2.5 cm	27%	1.5 cm - 2.5 cm	36%	2.0 cm - 4.0 cm	42%
Larger than 2.5 cm	27%	Larger than 2.5 cm	35%	Larger than 4.0 cm	28%
Did not know size	8%	Did not know size	6%	Did not know size	15%

Symptoms

Discussion of ‘Symptoms’ throughout this report refers to symptoms that respondents reported related to their tumor. Some previous literature places a distinction on symptoms that relate to the existence of an AN tumor and distinguishes those from symptoms that result from some type of intervention or treatment. For example, medical literature indicates that post surgery headaches may sometimes be associated with sub-occipital (also known as retrosigmoid) surgery as this approach may leave skull fragments due to intra-dural drilling. This is an example of a symptom related to treatment and not necessarily just to the existence of a tumor.

References to ‘Symptoms’ throughout this report make no such distinction. All symptoms reported are those experienced by respondents regardless of their treatment status. The reader can delve into each symptom reported on a pre- and post-treatment basis to determine if the symptom appears to be associated with the existence of the tumor or if it appears to be the result of treatment.

The primary acoustic neuroma symptoms from all three surveys remain similar with more than half of the respondents reporting issues with single-sided hearing loss, tinnitus and balance issues. In the 2007-2008 survey, single-sided hearing loss was reported by 88% of respondents, tinnitus by 73% and balance issues (vertigo/dizziness) by 59%. These symptoms were followed by fullness in the ear, which was reported by 38% of respondents, headaches and fatigue by 33% each, eye problems by 31%, facial weakness or paralysis by 28%, memory difficulties by 24% and facial numbness by 23%.

Respondents to the 2007-2008 survey were asked to report which symptoms they experienced as a result of their tumor. They were then asked follow up questions about their experience with those symptoms at initial tumor diagnosis and at the time they completed the survey².

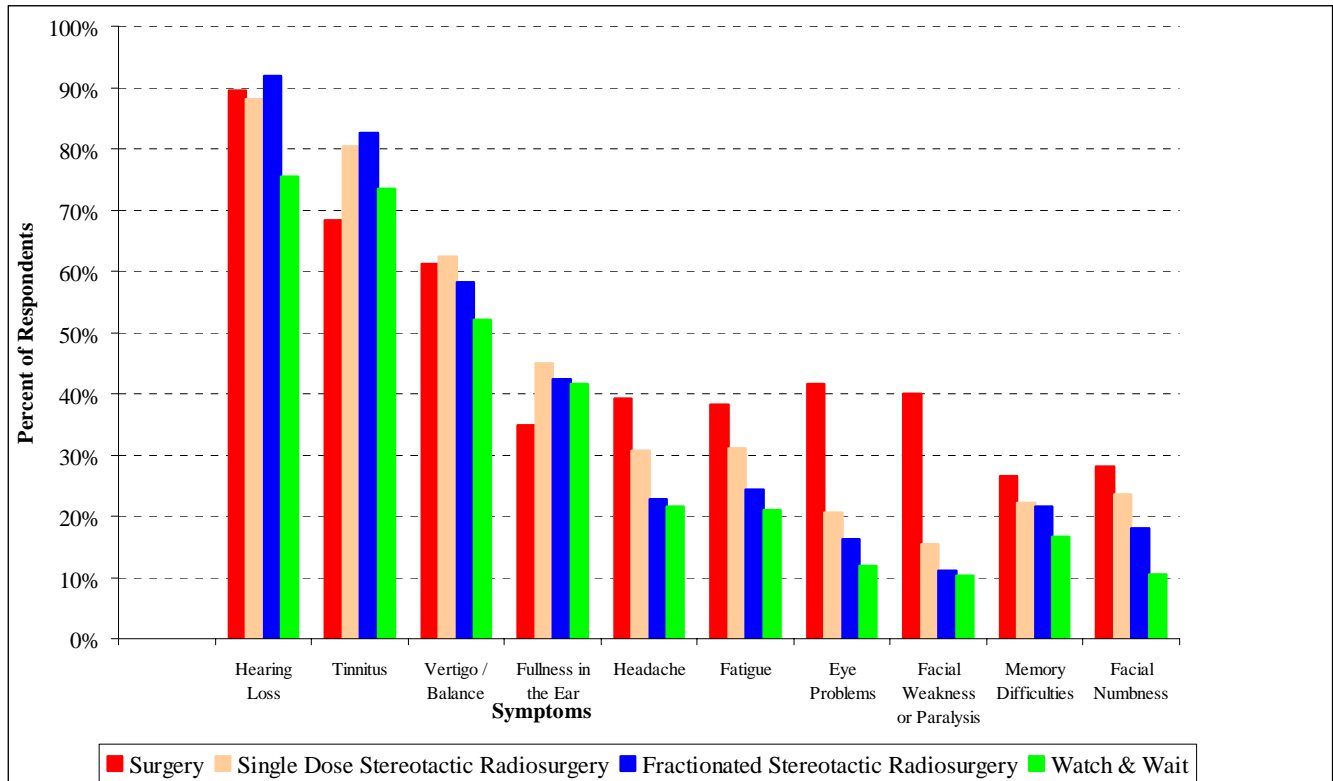
² Respondents who had received treatment prior to the time they completed the survey reported information regarding their symptoms at the time of initial diagnosis (or pre-treatment) versus the time at which they completed the survey (or post-treatment). Respondents who were still watching and waiting at the time they completed the survey, reported information regarding their symptoms at the time of initial diagnosis versus the time they completed the survey with no treatment in the interim.

The following table illustrates the percentage of respondents experiencing a selected set of symptoms related to their tumor in each of the three surveys conducted by the ANA to date:

Symptoms reported by respondents	2007-2008	1998	1983
Single-Sided Hearing Loss or Deafness	88%	88%	86%
Tinnitus	73%	64%	57%
Vertigo or Balance Disturbance	59%	64%	61%
Facial Weakness or Paralysis	28%	14%	NA
Headaches	33%	33%	37%
Eye Problems	31%	16%	NA
Change in Smell or Taste	20%	10%	NA
Facial Twitching	16%	13%	NA
Facial Numbness	23%	22%	NA
Fullness in Ear	38%	43%	NA
Difficulty Swallowing	11%	7%	NA
Difficulty Concentrating	17%	NA	NA
Fatigue	33%	NA	NA
Depression	19%	NA	NA
Memory Difficulties	24%	NA	NA
No Symptoms	1%	NA	NA

The 2007-2008 survey segmented respondents by the type of treatment they have received. Previous surveys did not. Therefore, we are able to examine how symptoms experienced by respondents receiving one treatment modality (microsurgery for example) may have differed from those experienced by respondents who were treated by some other method or who have received no treatment at all.

The chart below illustrates the percentage of respondents reporting they have experienced certain symptoms by type of treatment received:



Detailed information regarding symptoms experienced by each group of respondents (segmented by the type of treatment they received) is provided hereafter in the body of this report.

Treatment

Treatment choices reported by respondents in the 2007-2008 survey appear to have changed in comparison to prior surveys. In 1983 all of the respondents reported having been treated via microsurgery³. In 1998, 85% of respondents reported having had microsurgery and in the 2007-2008 survey, 61% reported being treated via microsurgery. Some form of Radiosurgery/Radiotherapy was reported as the treatment received in the 2007-2008 survey by 20% of respondents and in 1998 by 5% of respondents. Another significant change is that observation/watching & waiting, was reported in the 2007-2008 survey by 20% of respondents compared to 4% in 1998.

³ The use of the word “surgery” and “microsurgery” in each survey can be attributed to the fact that in 1983, although the operating microscope was in use for procedures of this type by 1970, there was often no verbal distinction made between surgery and microsurgery. By 1998 the operating microscope was used in virtually all operations for acoustic neuroma, hence the description “microsurgery.”

The table below illustrates the treatment choices made by respondents in each of the three surveys conducted by ANA to date⁴:

Treatment reported by respondents:	2007-2008	1998	1983
Translabyrinthine Approach	33%	51%	72%
Retrosigmoid/Sub-occipital Approach	17%	28%	11%
Middle Fossa Approach	10%	6%	3%
Don't Know Which Surgical Approach	0%	0%	14%
Total Microsurgical Resection	61%	85%	100%
Stereotactic Radiosurgery such as Gamma Knife (SSR)	12%	NA	NA
Fractionated Stereotactic Radiosurgery (FSR)	8%	NA	NA
Total Radiosurgery/Radiotherapy	20%	5%	0%
Watch & Wait	20%	4%	0%
Don't Know What Type of Treatment	NA	6%	0%
Total	100%	100%	100%

Surgery

The Translabyrinthine surgical approach remains the most frequently reported form of microsurgical resection with 33% of all survey respondents reporting this approach in 2007-2008, while 51% of all respondents reported treatment via this approach in 1998 and 72% in 1983. Notably, 49% of the respondents in 2007-2008 who reported having had surgery indicated they had no complications following surgery. The most common complication following surgery, reported in the 2007-2008 survey, was cerebrospinal fluid (CSF) leak, reported by 18% of respondents who had surgery, similar to the 1998 reported result of 17% (See page 18 of the 2007-2008 survey results for details regarding complications reported by respondents indicating they had undergone microsurgery).

Tumor re-growth following initial microsurgery was reported by 7% in the 2007-2008 survey. Of these respondents, 43% reported that the re-growth occurred more than 4 years after surgery.

For detailed information reported by respondents indicating they had undergone microsurgery, please see the 2007-2008 survey results 'Microsurgery' section (pages 17-32).

Radiosurgery / Radiotherapy

A significant change in the 2007-2008 survey versus prior surveys is the number of respondents who reported that they had been treated by some form of radiosurgery/radiotherapy. In the 2007-2008 survey, radiosurgery/radiotherapy was reported as the treatment choice for 20% of respondents versus 5% in the 1998 survey.

⁴ Percentages may not total precisely due to rounding.

In the 2007-2008 survey, 58% of those having radiation treatment reported having single dose stereotactic radiosurgery (SSR) and 42% reported having fractionated stereotactic radiosurgery (FSR). The vast majority (greater than 90%) of those having radiation treatment reported that it occurred after the year 2000 (See page 34 of the 2007-2008 survey results for details regarding reported change in tumor size).

For detailed information reported by respondents indicating they had undergone Single Dose Stereotactic Radiosurgery (SSR), please see the 2007-2008 survey results 'SSR' section (pages 33-47). For detailed information reported by respondents indicating they had undergone Fractionated Stereotactic Radiosurgery (FSR), please see the 2007-2008 survey results 'FSR' section (pages 48-62).

Observation

Another change in the 2007-2008 survey results compared to prior surveys is the number of acoustic neuroma patients who reported choosing to observe their tumor – to watch and wait rather than seeking treatment. In the 2007-2008 survey 20% of respondents chose this option, whereas in 1998 only 4% reported continued observation. The majority of the respondents to the 2007-2008 survey who were 'watching & waiting' (77%) indicated no change in the size of their tumor from initial diagnosis to the time they completed the survey. The average time elapsed between initial diagnosis and the most recent MRI reported by this group was 4.2 years.

For detailed information reported by respondents indicating they had not undergone treatment and were 'watching & waiting', please see the 2007-2008 survey results 'Watch & Wait' section (pages 63-75).

Post-treatment Rehabilitation Therapies

In the 2007-2008 survey, respondents indicating that they had microsurgery reported the largest number of rehabilitation therapies after treatment, with 34% reporting some form of balance treatment/physical therapy and 20% reporting facial movement treatment. In the 1998 survey following microsurgery, 24% reported having balance retraining and 15% of the respondents reported undergoing some form of rehabilitative facial surgery while 18% reported having facial muscle retraining.

Details on post treatment rehabilitation therapies can be found in the 2007-2008 survey results towards the end of each treatment section (page 31 for microsurgery respondents; page 46 for SSR respondents; page 61 for FSR respondents; and page 74 for respondents who were watching & waiting).

INTRODUCTION

In 1983 the Acoustic Neuroma Association (ANA) surveyed its 832 members by questionnaire, reporting on the experiences of the 541 responding members who had been treated for Acoustic Neuroma (AN). This information provided new insights into AN diagnosis and treatment in the United States. The 1983 results were published in a 1988 ANA patient information booklet, as well as a 1989 article in the medical journal, *The Laryngoscope*. In order to update and expand on that information, another member survey was designed and mailed to 2,372 patient-members of ANA in 1998. An article summarizing responses received from 1,940 members was published by ANA.

In a continuing effort to advance our understanding of AN tumors, ANA has once again conducted a survey. The 2007-2008 survey was available online at www.ANAUSA.org from August 2007 – February 2008 and paper copies of the survey were made available to members without Internet access upon written request. An email notification of the online availability of the survey was sent to approximately 4,000 email addresses contained in the ANA database. 2,004 respondents completed the survey as of its close in February 2008⁵.

PURPOSE

In keeping with the mission of ANA, the 2007-2008 survey was conducted to provide information regarding the symptoms, diagnosis, treatment and post-treatment issues experienced by AN patients. Although this information is self-reported and therefore could not be verified for accuracy, it is meant to provide a basic set of data for newly diagnosed, pre- and post-treatment AN patients who share a condition for which such data is currently lacking.

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METHOD

Beginning in August 2007, email notifications announcing the availability of the online survey were sent to approximately 4,000 current and past ANA members for whom email addresses were on file. In addition, the availability of the online survey was promoted on the ANA website and in several editions of *Notes* (Newsletter), as well as at the 2007 ANA Symposium in Philadelphia. Finally, 75 paper surveys were mailed upon written request to those members who did not have Internet access. In all, 2,004 members completed the survey (including 51 paper surveys received by mail).

The online survey was adaptive, meaning it queried respondents about only those symptoms and treatments that they indicated they had experienced. This was an attempt to minimize questions that were not applicable to a respondent's situation. This was a self-assessment survey rather than a clinical one. Not all surveys were completed and those which were not completed are not included

⁵ Data reported excludes duplicate and erroneous entries that ANA was able to identify. There can be no guarantee that data included in the 2,004 completed responses are accurate and not duplicative or erroneous entries.

in the results presented herein. Responses were captured in a database and analyzed by ANA. Percentages throughout the following report may not total 100% due to rounding.

RESPONDENTS

It is difficult to calculate the total response rate for this online survey and compare it to response rates of prior ANA paper based surveys. Although email notifications were sent to approximately 4,000 email addresses contained in ANA's database, it is impossible to know if all email addresses were correct, up to date and not duplicative. In addition the survey was promoted on the ANA website.

Of the 2,004 surveys completed, 19 respondents indicated being diagnosed with a tumor other than an acoustic neuroma. In an effort to make apples-to-apples comparisons and report on data relevant to AN patients, these responses have been excluded from the data reported here. In addition, 51 respondents reported being diagnosed with Neurofibromatosis Type II (NF2). These patient's responses have also been excluded from results reported here. While ANA recognizes that other tumors and conditions, such as NF2, are similar or related to acoustic neuroma, our goal was to report specifically on the acoustic neuroma condition and experience. Therefore, the results include data captured from 1,934⁶ respondents who reported being diagnosed with acoustic neuroma only.

Demographics

The following categories relate to demographic data about the respondents. Each table below reports the number of respondents (denoted in the column labeled #) in each category and in total, as well as the percentage (denoted in the column labeled %) of the total respondents to that question.

Gender:	#	%
Male	739	38%
Female	1,195	62%
Total	1,934	100%

Ethnicity:	#	%
Caucasian	1,809	94%
African/African-American/W. Indian (Black)	15	1%
Asian/Pacific Islander	45	2%
Hispanic/Latino	40	2%
Native American	6	0%
Other	19	1%
Total	1,934	100%

⁶ 2,004 (total respondents) – 19 (respondents indicating a tumor other than AN) – 51 (respondents diagnosed with NFII) = 1,934

Age when tumor was diagnosed:	#	%
Less than 12 years old	1	0%
12 - 20 years old	12	1%
21 - 30 years old	113	6%
31 - 40 years old	313	16%
41 - 50 years old	629	33%
51 - 60 years old	581	30%
61 - 70 years old	237	12%
71 - 80 years old	36	2%
81 or older	12	1%
Total	1,934	100%

Tumor Statistics

The survey queried all respondents about specific location and size of their tumor upon diagnosis. The following results were reported:

Which side is tumor on:	#	%
Right	951	49%
Left	975	50%
Bilateral (Both sides)	8	0%
Total	1,934	100%

Tumor side appears to be relatively evenly distributed between right and left. It is noteworthy that 8 respondents reported having bilateral tumors but did not respond affirmatively as having been diagnosed with NF2⁷.

Size of tumor at diagnosis:	#	%
0.1 - 0.4 cm	146	8%
0.5 - 1.0 cm	288	15%
1.1 - 1.5 cm	294	15%
1.6 - 2.0 cm	255	13%
2.1 - 2.5 cm	266	14%
2.6 - 3.0 cm	162	8%
3.1 - 3.5 cm	133	7%
3.6 - 4.0 cm	72	4%
Larger than 4cm	155	8%
Don't Know	163	8%
Total	1,934	100%

Interestingly, 51% of respondents reported having a tumor, which was 2.0 centimeters or smaller at the time they were diagnosed.

⁷ As noted in the preamble all data collected was reported by individual patients and as such is subject to error.

Diagnostic Tools Utilized

The following table illustrates the number of respondents reporting being tested by each of the listed diagnostic methods. Please keep in mind that respondents had the ability to choose more than one diagnostic method and percentages are of the total 1,934 respondents:

Respondents reporting they received the following diagnostic tests:	#	%
CT scan (Computerized Tomography)	393	20%
MRI scan (Magnetic Resonance Image)	1,817	94%
Brainstem Auditory Evoked Response (BAER, BSER or ABR)	286	15%
Hearing Test (Audiogram)	1,336	69%
Balance Test (Electronystagmogram - ENG)	382	20%
Don't Know	3	0%

It appears that MRI (94%) and Audiogram (69%) are utilized most often in diagnosing AN tumors.

Symptoms Reported

The following table illustrates the number of respondents experiencing each of the listed symptoms. Please keep in mind that respondents had the ability to choose multiple symptoms and the percentages listed are of the total 1,934 respondents:

Respondents reported experiencing the following symptoms related to their tumor:	#	%
Single-sided hearing loss or deafness	1,697	88%
Tinnitus (Noise or ringing in the ear)	1,406	73%
Vertigo (Dizziness/Balance Disturbance)	1,144	59%
Fullness in Ear	738	38%
Headaches	638	33%
Fatigue	629	33%
Eye Problems	591	31%
Facial Weakness or Paralysis	542	28%
Memory Difficulties	457	24%
Facial Numbness	439	23%
Change in Smell or Taste	392	20%
Depression	372	19%
Difficulty Concentrating	334	17%
Facial Twitching	319	16%
Difficulty Swallowing	208	11%
No Symptoms	21	1%

The data above represents symptoms reported by respondents without regard to their treatment status. Information about what symptoms were experienced pre-treatment versus post-treatment will be discussed in later sections of this report. Single-Sided Hearing Loss, Tinnitus and Vertigo were the most prevalently experienced symptoms and were reported by more than half of the 1,934 total respondents.

The following table illustrates the percentage of respondents reporting single-sided hearing loss, tinnitus, vertigo and headaches in the 1983 survey, the 1998 survey and this current 2007-/2008 survey:

Comparison of common symptoms to 1983 and 1998 surveys:	1983	1998	2008
Single-sided hearing loss or deafness	86%	88%	88%
Tinnitus (Noise or ringing in the ear)	57%	64%	73%
Vertigo (Dizziness/Balance Disturbance)	61%	64%	59%
Headaches	37%	33%	33%

Treatment Choices

The following table illustrates the number of distinct treatments respondents have undergone related to their AN⁸:

Number of treatments received:	#	%
Respondents who have NOT received any treatment (Watching & Waiting)	380	20%
Respondents who have received 1 treatment to date	1,488	77%
Respondents who have received 2 treatments to date	56	3%
Respondents who have received 3 or more treatments to date	10	1%

The vast majority of respondents (97%) are either watching and waiting (20%) or have received only one treatment to date (77%) for their AN. Less than 5% of respondents reported having received multiple treatments for their AN.

The table below illustrates which treatments were reported by those respondents indicating that they have received treatment⁹:

Treatment modality:	#	%
Microsurgical resection (surgery/craniotomy)	1171	75%
Stereotactic Radiosurgery (single session radiation treatment, such as Gamma Knife) (SSR)	224	14%
Fractionated Stereotactic Radiosurgery/Radiotherapy (radiation treatment performed in multiple sessions or fractions) (FSR)	159	10%
Total	1,554	100%

Interestingly, 85% of respondents to the 1998 survey indicated undergoing some form of surgery for treatment of their AN with only 5% reporting that they had undergone some form of radiosurgery. The remaining 10% indicated that they did not know what type of treatment they had received. By contrast, 25% of respondents who had received treatment to date reported undergoing some form of radiosurgery in the 2007-2008 survey.

⁸ Please note that a course of fractionated stereotactic radiosurgery (FSR) counts as only one treatment although it is administered in multiple sessions.

⁹ The values in the table indicate the 1st treatment reportedly received by those respondents who indicated being treated more than once.

The remainder of this report segments the respondents by which treatment modality they underwent, as well as those who are watching and waiting. Each of the following sections contain data on treatment issues (duration of hospitalization, complications and symptoms), as well as post-treatment matters.

MICROSURGERY

Of the 1,934 total respondents indicating that they were diagnosed with AN, 1,188¹⁰ respondents indicated having been treated via microsurgical resection of their tumor.

Date of Treatment

The following table indicates the time period during which these surgeries occurred:

Respondents indicated undergoing Microsurgery during the following periods:	#	%
Prior to 1990	103	9%
Between 1991 and 1999	292	25%
Between 2000 and 2008	793	67%
Total	1,188	100%

Treating Physician / Institution

Respondents indicated that they were treated by dozens of physicians at several dozen institutions around the country and outside the U.S. The following table illustrates only those institutions and physicians cited by a minimum of 20 respondents.

Institution / Hospital	Location	Physicians Listed by Respondents
Baptist Hospital	Nashville, TN	Glasscock, Jackson, Gardner
Barrow Neurological Institute	Phoenix, AZ	Daspit, Spetzler
Columbia-Presbyterian Hospital	New York, NY	Sisti
Duke University	Raleigh/Durham, NC	Cunningham, Friedman, Fukushima, McElveen, Sampson, Tucci
House Ear Clinic	Los Angeles, CA	Brackmann, Friedman, House, Hitselberger, Luxford, Slattery
Johns Hopkins	Baltimore, MD	Brem, Holliday, Long, Niparko, Tamargo, Weingart
Loyola Medical Center	Maywood, IL	Leonetti
Massachusetts General	Boston, MA	Barker, Martuza, McKenna, Ojemann
Mayo Clinic	Rochester, MN	Ebersold, Harner, Link
Mount Sinai Hospital	New York, NY	Post
New York University Medical Center	New York, NY	Cohen, Roland, Golfinos
Northwestern/Evanston/Hinsdale	Evanston/Hinsdale, IL	Chandler, Levy, Wiet
Ohio State University	Columbus, OH	Dodson, Welling
Oregon Health Sciences University	Portland, OR	Delashaw, McMenomey
Providence Hospital	Southfield, MI	Bojrab, Kartush, Larouere
Shands Hospital, University of Florida	Gainesville, FL	Antonelli, Lewis, Rhoton
Stanford Medical Center	Palo Alto, CA	Chang, Jackler, Roberson
Swedish Medical Center	Seattle, WA	Mangham, Mayberg
Tampa General	Tampa, FL	Bartels
Thomas Jefferson University	Philadelphia, PA	Rosenwasser, Wilcox
UC San Francisco	San Francisco, CA	Jackler, Pitts
University of Cincinnati Hospital	Cincinnati, OH	Pensak, Tew
University of Pennsylvania	Philadelphia, PA	Bigelow

¹⁰ Note that this figure includes those respondents indicating that they had received more than one treatment.

Duration of Hospitalization

The table below indicates the length of hospitalization reported by respondents in connection with their surgery:

Length of hospitalization:	#	%
1 day	14	1%
2 - 3 days	144	12%
4 - 6 days	607	51%
7 - 10 days	259	22%
More than 10 days	164	14%
Total	1,188	100%

Surgical Approach

The following table illustrates which surgical approach was reported by respondents¹¹:

Surgical approach reported by respondents:	#	%
Translabyrinthine Approach	640	55%
Retrosigmoid/ Sub-occipital Approach	336	29%
Middle Fossa Approach	195	17%
Total	1,171	100%

Complications Reported

The following table illustrates certain complications reported by respondents. Respondents were able to select having experienced multiple complications so the percentages to the right indicate the number reported divided by the total number of surgeries reported (1,188).

Respondents reported the following complications related to their surgery:	#	%
Cerebrospinal Fluid Leak (CSF Leak)	211	18%
Hydrocephalus (Water on the Brain)	31	3%
Wound infection	40	3%
Coma	8	1%
Intractable vertigo (sustained vertigo lasting longer than 30 days)	106	9%
Other	372	31%
No Complications	585	49%

¹¹ This number includes respondents' first treatment only.

Tumor Re-growth

81 respondents (approximately 7% of the total 1,188 respondents who indicated having undergone surgery) indicated that they observed re-growth of their tumor following surgery. The following table indicates the timeframe during which this re-growth was observed in terms of years after the respondent had undergone surgery.

Tumor re-growth was first observed:	#	%
Less than 1 year after surgery	17	21%
1 - 2 years after surgery	13	16%
2 - 3 years after surgery	9	11%
3 - 4 years after surgery	7	9%
More than 4 years after surgery	35	43%
Total respondents reporting re-growth after surgery	81	100%

It should be noted that there are several potential alternative explanations for the observation of “re-growth” of the tumor following surgery where none may have actually occurred. Such explanations could possibly include:

- (i) Only partial microsurgical resection (also known as “de-bulking”) may have been performed whereby some residual tumor is left in place. In this case, subsequent diagnostic imaging may show that portion of the tumor which was intentionally left in place and may be mistakenly referred to as re-growth.
- (ii) Diagnostic imaging is not perfectly accurate and may indicate slight change in tumor size when compared to prior images. Tumor re-growth may have been reported as a result of this inherent inaccuracy (possibly due to use of different equipment) rather than actual changes in tumor size.

Symptoms

The survey asked respondents to indicate which symptoms they had experienced, at any time, as a result of their acoustic neuroma. Only those respondents who reported experiencing a specific symptom were queried about their experience with that symptom. Percentages reported below are out of the 1,188 respondents indicating they had undergone microsurgical resection of their tumor.

The following table illustrates symptoms reported by respondents who were treated via microsurgical resection and that were experienced as a result of their tumor¹².

Symptoms reported by Respondents treated via Microsurgical resection:	#	%
Single-sided hearing loss or deafness ⁽¹²⁾	1,063	89%
Tinnitus (Noise or ringing in the ear)	812	68%
Vertigo (Dizziness/Balance Disturbance)	728	61%
Eye Problems	493	41%
Facial Weakness or Paralysis	475	40%
Headaches	466	39%
Fatigue	454	38%
Fullness in Ear	413	35%
Facial Numbness	333	28%
Memory Difficulties	316	27%
Change in Smell or Taste	317	27%
Depression	274	23%
Difficulty Concentrating	231	19%
Facial Twitching	227	19%
Difficulty Swallowing	170	14%

¹² The number of respondents in the “Single-sided hearing loss or deafness” category includes those treated via the Translabyrinthine approach even though this method's guaranteed result is single-sided deafness. 423 respondents who were treated via the retro-sigmoid/sub-occipital and middle-fossa approaches indicated experiencing single-sided hearing loss or deafness out of a total of 531 (423/531 = 80%) respondents who were treated via these microsurgical approaches.

Hearing Statistics

The following table indicates the self-reported Gardner-Robertson Class of respondents who underwent microsurgery via the Retrosigmoid/Sub-Occipital or Middle Fossa approaches at the date of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below). Respondents reporting they had been operated on via the Translabyrinthine approach were excluded from this data as this approach results in guaranteed tumor side deafness.

Respondents self-reported Gardner-Robertson Class who were NOT treated via Translabyrinthine approach:	At Diagnosis		At Present	
	#	%	#	%
Class 1	120	28%	12	3%
Class 2	121	29%	33	8%
Class 3	42	10%	23	5%
Class 4	23	5%	26	6%
Class 5	14	3%	263	62%
Don't Know	103	24%	66	16%
Total	423	100%	423	100%

Gardner-Robertson Class Parameters
Class 1: (Good, Excellent Hearing = PTA 0-30 dB; SD 70-100%)
Class 2: (Serviceable Hearing = PTA 31-50 dB; SD 50-69%)
Class 3: (Non-Serviceable Hearing = PTA 51-90 dB; SD 5-49%)
Class 4: (Poor Hearing = PTA 91-100 dB; SD 1-4%)
Class 5: (No Hearing = PTA 0; SD 0%)

Legend
PTA = Pure Tone Average
dB = Decibels
SD = Speech Discrimination Score

Tinnitus

The following table illustrates the frequency with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	382	47%	539	66%
Daily (At least once a day)	183	23%	98	12%
Weekly (At least once a week)	77	9%	55	7%
Monthly (At least once a month)	35	4%	27	3%
Less frequent than once a month	44	5%	36	4%
I no longer experience tinnitus	9	1%	52	6%
Don't Know	82	10%	5	1%
Total Respondents	812	100%	812	100%

The following table illustrates the severity with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	27	3%	22	3%
9	27	3%	29	4%
8	43	5%	34	4%
7	77	9%	65	8%
6	73	9%	82	10%
5	128	16%	97	12%
4	114	14%	73	9%
3	121	15%	82	10%
2	100	12%	80	10%
1 (Least Severe / Mild)	102	13%	248	31%
Total Respondents	812	100%	812	100%

Vertigo / Balance Disturbance

The following table illustrates the frequency with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	136	19%	101	14%
Daily (At least once a day)	198	27%	169	23%
Weekly (At least once a week)	137	19%	94	13%
Monthly (At least once a month)	64	9%	60	8%
Less frequent than once a month	113	16%	98	13%
I no longer experience vertigo	20	3%	191	26%
Don't Know	60	8%	15	2%
Total Respondents	728	100%	728	100%

The following table illustrates the severity with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	76	10%	10	1%
9	63	9%	10	1%
8	67	9%	20	3%
7	71	10%	27	4%
6	59	8%	85	12%
5	83	11%	86	12%
4	72	10%	75	10%
3	79	11%	92	13%
2	76	10%	139	19%
1 (Least Severe / Mild)	82	11%	184	25%
Total Respondents	728	100%	728	100%

Facial Nerve Function

The following table indicates the self-reported House-Brackmann Grade of respondents who underwent microsurgery at the date of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below):

Respondents self-reported House-Brackmann Grade at time of diagnosis and at time of survey:	At Initial Onset		At Present	
	#	%	#	%
Grade 1	339	71%	29	6%
Grade 2	60	13%	134	28%
Grade 3	13	3%	119	25%
Grade 4	11	2%	94	20%
Grade 5	7	1%	37	8%
Grade 6	12	3%	38	8%
Don't Know	33	7%	24	5%
Total Respondents	475	100%	475	100%

Definition of House-Brackmann Grades

Grade 1: Normal facial function in all areas.

Grade 2: Mild movement weakness, normal symmetry at rest. Slight weakness noticeable on close inspection; may have very slight synkinesis (inappropriate movement with voluntary movement of another muscle), moderate to good forehead motion, complete eye closure with minimum effort, only slight mouth disturbance.

Grade 3: Moderate dysfunction with noticeable asymmetry, good eye closure. Obvious but not disfiguring difference between two sides; noticeable but not severe synkinesis. Normal balance and tone at rest, slight to moderate movement of forehead, complete eye closure with effort, mouth movement slightly weak with maximum effort.

Grade 4: Moderately severe dysfunction with gross asymmetry and incomplete eye closure. Obvious facial weakness and/or disfiguring asymmetry with gross movement. Normal symmetry and tone at rest. No forehead movement on affected side, incomplete eye closure, mouth asymmetric with maximum effort.

Grade 5: Severe dysfunction with minimal facial movement. Only barely perceptible motion with attempted movement. Face unbalanced at rest. No forehead motion, incomplete eye closure. Slight mouth movement possible.

Grade 6: Complete paralysis. No movement.

Headaches

The following table illustrates the frequency with which respondents reported experiencing headaches related to their tumor at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	98	21%	41	9%
Daily (At least once a day)	131	28%	88	19%
Weekly (At least once a week)	128	27%	94	20%
Monthly (At least once a month)	53	11%	72	15%
Less frequent than once a month	30	6%	75	16%
I no longer experience headaches	4	1%	93	20%
Don't Know	22	5%	3	1%
Total Respondents	466	100%	466	100%

The following table illustrates the severity with which respondents reported experiencing headaches at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	77	17%	6	1%
9	55	12%	20	4%
8	65	14%	19	4%
7	68	15%	28	6%
6	45	10%	61	13%
5	47	10%	65	14%
4	30	6%	58	12%
3	45	10%	68	15%
2	16	3%	64	14%
1 (Least Severe / Mild)	18	4%	77	17%
Total Respondents	466	100%	466	100%

Eye Problems

The following table illustrates the frequency with which respondents reported experiencing eye problems related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing eye problems related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	219	44%	183	37%
Daily (At least once a day)	69	14%	130	26%
Weekly (At least once a week)	24	5%	46	9%
Monthly (At least once a month)	14	3%	29	6%
Less frequent than once a month	47	10%	47	10%
I no longer experience eye problems	62	13%	48	10%
Don't Know	58	12%	10	2%
Total Respondents	493	100%	493	100%

Changes in Sense of Taste or Smell

The following table illustrates the frequency with which respondents reported experiencing changes in their sense of taste or smell related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing changes in sense of Taste / smell with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	139	44%	120	38%
Daily (At least once a day)	54	17%	67	21%
Weekly (At least once a week)	17	5%	30	9%
Monthly (At least once a month)	9	3%	11	3%
Less frequent than once a month	21	7%	18	6%
I no longer experience changes in sense of smell or taste	35	11%	63	20%
Don't Know	42	13%	8	3%
Total Respondents	317	100%	317	100%

Facial Twitching

The following table illustrates the frequency with which respondents reported experiencing facial twitching related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial twitching related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	27	12%	15	7%
Daily (At least once a day)	79	35%	42	19%
Weekly (At least once a week)	54	24%	49	22%
Monthly (At least once a month)	18	8%	32	14%
Less frequent than once a month	13	6%	41	18%
I no longer experience facial twitching	13	6%	43	19%
Don't Know	23	10%	5	2%
Total Respondents	227	100%	227	100%

Facial Numbness

The following table illustrates the frequency with which respondents reported experiencing facial numbness related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial numbness related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	185	56%	148	44%
Daily (At least once a day)	38	11%	36	11%
Weekly (At least once a week)	28	8%	20	6%
Monthly (At least once a month)	10	3%	15	5%
Less frequent than once a month	17	5%	22	7%
I no longer experience facial numbness	21	6%	85	26%
Don't Know	34	10%	7	2%
Total Respondents	333	100%	333	100%

Fullness in the Tumor Side Ear

The following table illustrates the frequency with which respondents reported experiencing a feeling of fullness in their tumor side ear at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing a sensation of fullness in their tumor side ear with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	199	48%	148	36%
Daily (At least once a day)	73	18%	37	9%
Weekly (At least once a week)	61	15%	40	10%
Monthly (At least once a month)	19	5%	23	6%
Less frequent than once a month	22	5%	40	10%
I no longer experience fullness in the ear	9	2%	119	29%
Don't Know	30	7%	6	1%
Total Respondents	413	100%	413	100%

Difficulty Swallowing

The following table illustrates the frequency with which respondents reported experiencing difficulty swallowing related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty swallowing related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	57	34%	28	16%
Daily (At least once a day)	45	26%	45	26%
Weekly (At least once a week)	14	8%	32	19%
Monthly (At least once a month)	6	4%	15	9%
Less frequent than once a month	14	8%	26	15%
I no longer experience fatigue	19	11%	19	11%
Don't Know	15	9%	5	3%
Total Respondents	170	100%	454	100%

Difficulty Concentrating

The following table illustrates the frequency with which respondents reported experiencing difficulty concentrating at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty concentrating with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	59	26%	52	23%
Daily (At least once a day)	81	35%	86	37%
Weekly (At least once a week)	36	16%	42	18%
Monthly (At least once a month)	8	3%	19	8%
Less frequent than once a month	14	6%	21	9%
I no longer experience difficulty concentrating	5	2%	7	3%
Don't Know	28	12%	4	2%
Total Respondents	231	100%	231	100%

Fatigue

The following table illustrates the frequency with which respondents reported experiencing fatigue related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing fatigue related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	168	37%	82	18%
Daily (At least once a day)	132	29%	147	32%
Weekly (At least once a week)	62	14%	106	23%
Monthly (At least once a month)	17	4%	56	12%
Less frequent than once a month	20	4%	27	6%
I no longer experience fatigue	19	4%	30	7%
Don't Know	36	8%	6	1%
Total Respondents	454	100%	454	100%

Depression

The following table illustrates the frequency with which respondents reported experiencing depression at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing depression related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	80	29%	37	14%
Daily (At least once a day)	69	25%	42	15%
Weekly (At least once a week)	48	18%	52	19%
Monthly (At least once a month)	26	9%	51	19%
Less frequent than once a month	25	9%	55	20%
I no longer experience depression	9	3%	31	11%
Don't Know	17	6%	6	2%
Total Respondents	274	100%	274	100%

Memory Difficulties

The following table illustrates the frequency with which respondents reported experiencing memory difficulties related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing memory difficulties related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	47	15%	48	15%
Daily (At least once a day)	101	32%	127	40%
Weekly (At least once a week)	64	20%	59	19%
Monthly (At least once a month)	29	9%	27	9%
Less frequent than once a month	29	9%	42	13%
I no longer experience memory difficulties	10	3%	6	2%
Don't Know	36	11%	7	2%
Total Respondents	316	100%	316	100%

Post Surgery Treatments / Rehabilitation Therapies

The following table illustrates the number of respondents receiving the following post-surgery treatments or rehabilitation therapies. Please keep in mind that respondents had the ability to choose multiple post-surgical treatments and rehabilitation therapies from the list below. The percentages listed are of the total 1,188 respondents, who indicated that they had undergone microsurgical resection of their tumor:

Surgery or treatment to correct facial weakness:	#	%
12-7 Anastomosis (transfer of the tongue nerve to the facial nerve, also called Hypoglossal-Facial Anastomosis)	58	5%
Cross face nerve graft	16	1%
Facial suspension or sling	18	2%
Face lift (tumor side)	24	2%
Face lift (both sides)	7	1%
Masseter muscle transposition	7	1%
Electrical stimulation of the face	64	5%
Other facial surgery	83	7%

Surgery to improve eyelid position and/or function:	#	%
Tarsorrhaphy (procedure in which lids are sewn together)	63	5%
Gold weight in eyelid	164	14%
Eyelid spring	31	3%
Lower eyelid repositioning	48	4%
Brow elevation	28	2%
Other eyelid surgery	87	7%

Treatment, physical therapy or training to improve:	#	%
Facial movement	232	20%
Balance	406	34%
Psychological issues	108	9%
Other treatment or therapy	125	11%

Hearing Improvement:	#	%
CROS hearing aid	96	8%
BiCROS hearing aid	26	2%
In-the-ear (ITE) hearing aid	58	5%
In-the-canal (ITC) hearing aid	25	2%
Bone Conduction Hearing Aid (like Baha® and TransEar®)	95	8%
FM system or other amplifier (carried in pocket or placed on a table)	20	2%
Device to amplify TV	36	3%
Device to amplify telephone	20	2%
Direct audio input microphone	1	0%
Other	97	8%

SINGLE DOSE STEREOTACTIC RADIOSURGERY (SSR)

Of the 1,934 total respondents indicating that they were diagnosed with AN, 271¹³ respondents indicated having been treated via single dose Stereotactic Radiosurgery (SSR).

Date of Treatment

The following table indicates the time period during which treatment occurred:

Respondents indicated undergoing SSR during the following periods:	#	%
Prior to 1990	1	0%
Between 1991 and 1999	24	9%
Between 2000 and 2008	245	91%
Total	270	100%

Treating Physician / Institution

Respondents indicated that they were treated by dozens of physicians at several dozen institutions around the country and outside the U.S. The following table illustrates only those institutions cited by a minimum of 5 respondents.

Institution / Hospital	Location	Physicians listed by Respon
Emory University Hospital	Atlanta, GA	Mattox
Massachusetts General Hospital	Boston, MA	Loeffler
University of Virginia	Charlottesville, VA	Steiner
St. Anthony's Hospital	Denver, CO	Johnson
Shands at the University of Florida	Gainesville, FL	Friedman, Foote
Research Medical Center	Kansas City, MO	Chilton, Cullen
Columbia Presbyterian	New York, NY	Sisti
Thomas Jefferson University Hospital	Philadelphia, PA	Andrews, Curran
University of Pittsburgh Medical Center	Pittsburgh, PA	Lunsford, Kondziolka
Mayo Clinic	Rochester, MN	Link
Scripps / San Diego Gamma Knife Center	San Diego, CA	Ott
University of California at San Francisco	San Francisco, CA	McDermott, Pitts

¹³ Note that this figure includes those respondents indicating that they had received more than one treatment.

Marginal Radiation Dose

The table below indicates the marginal radiation dose that respondents reported they had received (This is the amount of radiation delivered to the tumor margin or the 50% isodose line) (Radiation delivered to the tumor site is measured in Gray (Gy) or Rads - Note 1 Gy = 100 Rads):

Marginal dose of radiation received:	#	%
Less than 10 Gy	3	1%
10.0 - 10.9 Gy	1	0%
11.0 - 11.9 Gy	8	3%
12.0 - 12.9 Gy	29	11%
13.0 - 13.9 Gy	18	7%
14.0 - 14.9 Gy	5	2%
15.0 - 15.9 Gy	6	2%
16.0 - 16.9 Gy	4	1%
Greater than 16.9 Gy	3	1%
Don't Know	194	72%
Total respondents	271	100%

Post-Treatment Change in Tumor Size

The following table compares respondents' tumor size reported at diagnosis versus their tumor size as of their most recent, post-treatment MRI:

Tumor Size Reported at Initial Diagnosis vs. Post-Treatment	At Diagnosis		Post Treatment	
	#	%	#	%
0.1 - 0.4 cm	15	6%	131	48%
0.5 - 1.0 cm	40	15%	32	12%
1.1 - 1.5 cm	58	21%	23	8%
1.6 - 2.0 cm	48	18%	16	6%
2.1 - 2.5 cm	45	17%	16	6%
2.6 - 3.0 cm	16	6%	7	3%
3.1 - 3.5 cm	6	2%	1	0%
3.6 - 4.0 cm	9	3%	0	0%
> 4.0 cm	17	6%	1	0%
Don't Know	17	6%	44	16%
Total respondents	271	100%	271	100%

Complications Reported

The following table illustrates certain complications reported by respondents. Respondents were able to select having experienced multiple complications so the percentages to the right indicate the number reported divided by the total number of respondents indicating they had undergone single dose stereotactic radiosurgery (SSR) (271).

Respondents reported the following complications related to their treatment:	#	%
Cerebrospinal Fluid Leak (CSF Leak)	1	0%
Hydrocephalus (Water on the Brain)	4	1%
Wound infection	1	0%
Coma	16	6%
Intractable vertigo (sustained vertigo lasting longer than 30 days)	69	25%
Other	192	71%
No Complications	0	0%

Symptoms

The survey asked respondents to indicate which symptoms they had experienced as a result of their acoustic neuroma. Only those respondents who reported experiencing a specific symptom were queried about their experience with that symptom. Percentages reported below are out of the 271 respondents indicating they had undergone single dose stereotactic radiosurgery (SSR) resection of their tumor.

The following table illustrates symptoms reported by respondents who were treated via SSR and that were experienced as a result of their tumor.

Symptoms reported by respondents treated via SSR:	#	%
Single-sided hearing loss or deafness	239	88%
Tinnitus (Noise or ringing in the ear)	218	80%
Vertigo (Dizziness/Balance Disturbance)	169	62%
Eye Problems	56	21%
Facial Weakness or Paralysis	42	15%
Headaches	83	31%
Fatigue	84	31%
Fullness in Ear	122	45%
Facial Numbness	64	24%
Memory Difficulties	60	22%
Change in Smell or Taste	40	15%
Depression	39	14%
Difficulty Concentrating	48	18%
Facial Twitching	53	20%
Difficulty Swallowing	18	7%

Hearing Statistics

The following table indicates the self-reported Gardner-Robertson Class of respondents who underwent SSR at the time of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below).

Respondents self-reported Gardner-Robertson Class who were treated via Single Dose Stereotactic Radiosurgery (SSR):	At Diagnosis		At Present	
	#	%	#	%
Class 1	47	20%	2	1%
Class 2	61	26%	20	8%
Class 3	25	10%	33	14%
Class 4	21	9%	30	13%
Class 5	9	4%	76	32%
Don't Know	76	32%	78	33%
Total	239	100%	239	100%

Gardner-Robertson Class Parameters
Class 1: (Good, Excellent Hearing = PTA 0-30 dB; SD 70-100%)
Class 2: (Serviceable Hearing = PTA 31-50 dB; SD 50-69%)
Class 3: (Non-Serviceable Hearing = PTA 51-90 dB; SD 5-49%)
Class 4: (Poor Hearing = PTA 91-100 dB; SD 1-4%)
Class 5: (No Hearing = PTA 0; SD 0%)

Legend
PTA = Pure Tone Average
dB = Decibels
SD = Speech Discrimination Score

Tinnitus

The following table illustrates the frequency with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	107	49%	147	67%
Daily (At least once a day)	44	20%	24	11%
Weekly (At least once a week)	34	16%	18	8%
Monthly (At least once a month)	5	2%	11	5%
Less frequent than once a month	9	4%	12	6%
I no longer experience tinnitus	1	0%	3	1%
Don't Know	18	8%	3	1%
Total Respondents	218	100%	218	100%

The following table illustrates the severity with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	2	1%	2	1%
9	4	2%	6	3%
8	7	3%	11	5%
7	17	8%	18	8%
6	20	9%	21	10%
5	42	19%	27	12%
4	31	14%	13	6%
3	42	19%	33	15%
2	28	13%	21	10%
1 (Least Severe / Mild)	25	11%	66	30%
Total Respondents	218	100%	218	100%

Vertigo / Balance Disturbance

The following table illustrates the frequency with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	31	18%	19	11%
Daily (At least once a day)	54	32%	36	21%
Weekly (At least once a week)	25	15%	24	14%
Monthly (At least once a month)	22	13%	16	9%
Less frequent than once a month	22	13%	35	21%
I no longer experience vertigo	3	2%	33	20%
Don't Know	12	7%	6	4%
Total Respondents	169	100%	169	100%

The following table illustrates the severity with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	13	8%	1	1%
9	15	9%	6	4%
8	18	11%	4	2%
7	18	11%	10	6%
6	14	8%	15	9%
5	27	16%	32	19%
4	18	11%	22	13%
3	14	8%	18	11%
2	18	11%	27	16%
1 (Least Severe / Mild)	14	8%	34	20%
Total Respondents	169	100%	169	100%

Facial Nerve Function

The following table indicates the self-reported House-Brackmann Grade of respondents at the date of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below):

Respondents self-reported House-Brackmann Grade at time of diagnosis and at time of survey:	At Initial Onset		At Present	
	#	%	#	%
Grade 1	31	74%	2	5%
Grade 2	7	17%	20	48%
Grade 3	2	5%	11	26%
Grade 4	1	2%	8	19%
Grade 5	0	0%	0	0%
Grade 6	0	0%	1	2%
Don't Know	1	2%	0	0%
Total Respondents	42	100%	42	100%

Definition of House-Brackmann Grades
Grade 1: Normal facial function in all areas.
Grade 2: Mild movement weakness, normal symmetry at rest. Slight weakness noticeable on close inspection; may have very slight synkinesis (inappropriate movement with voluntary movement of another muscle), moderate to good forehead motion, complete eye closure with minimum effort, only slight mouth disturbance.
Grade 3: Moderate dysfunction with noticeable asymmetry, good eye closure. Obvious but not disfiguring difference between two sides; noticeable but not severe synkinesis. Normal balance and tone at rest, slight to moderate movement of forehead, complete eye closure with effort, mouth movement slightly weak with maximum effort.
Grade 4: Moderately severe dysfunction with gross asymmetry and incomplete eye closure. Obvious facial weakness and/or disfiguring asymmetry with gross movement. Normal symmetry and tone at rest. No forehead movement on affected side, incomplete eye closure, mouth asymmetric with maximum effort.
Grade 5: Severe dysfunction with minimal facial movement. Only barely perceptible motion with attempted movement. Face unbalanced at rest. No forehead motion, incomplete eye closure. Slight mouth movement possible.
Grade 6: Complete paralysis. No movement.

Headaches

The following table illustrates the frequency with which respondents reported experiencing headaches related to their tumor at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	10	12%	8	10%
Daily (At least once a day)	34	41%	19	23%
Weekly (At least once a week)	20	24%	21	25%
Monthly (At least once a month)	10	12%	15	18%
Less frequent than once a month	5	6%	11	13%
I no longer experience headaches	0	0%	9	11%
Don't Know	4	5%	0	0%
Total Respondents	83	100%	83	100%

The following table illustrates the severity with which respondents reported experiencing headaches at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	5	6%	3	4%
9	4	5%	1	1%
8	15	18%	7	8%
7	15	18%	3	4%
6	8	10%	9	11%
5	12	14%	11	13%
4	17	20%	12	14%
3	5	6%	12	14%
2	1	1%	17	20%
1 (Least Severe / Mild)	1	1%	8	10%
Total Respondents	83	100%	83	100%

Eye Problems

The following table illustrates the frequency with which respondents reported experiencing eye problems related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing eye problems related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	20	36%	22	39%
Daily (At least once a day)	10	18%	14	25%
Weekly (At least once a week)	6	11%	9	16%
Monthly (At least once a month)	5	9%	1	2%
Less frequent than once a month	7	13%	6	11%
I no longer experience eye problems	2	4%	2	4%
Don't Know	6	11%	2	4%
Total Respondents	56	100%	56	100%

Changes in Sense of Taste or Smell

The following table illustrates the frequency with which respondents reported experiencing changes in their sense of taste or smell related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing changes in sense of taste / smell with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	20	50%	16	40%
Daily (At least once a day)	7	18%	7	18%
Weekly (At least once a week)	3	8%	4	10%
Monthly (At least once a month)	3	8%	1	3%
Less frequent than once a month	1	3%	1	3%
I no longer experience changes in sense of smell or taste	1	3%	11	28%
Don't Know	5	13%	0	0%
Total Respondents	40	100%	40	100%

Facial Twitching

The following table illustrates the frequency with which respondents reported experiencing facial twitching related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial twitching related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	6	11%	3	6%
Daily (At least once a day)	13	25%	12	23%
Weekly (At least once a week)	20	38%	11	21%
Monthly (At least once a month)	4	8%	7	13%
Less frequent than once a month	5	9%	14	26%
I no longer experience facial twitching	2	4%	6	11%
Don't Know	3	6%	0	0%
Total Respondents	53	100%	53	100%

Facial Numbness

The following table illustrates the frequency with which respondents reported experiencing facial numbness related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial numbness related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	32	50%	29	45%
Daily (At least once a day)	12	19%	8	13%
Weekly (At least once a week)	6	9%	3	5%
Monthly (At least once a month)	2	3%	5	8%
Less frequent than once a month	1	2%	8	13%
I no longer experience facial numbness	4	6%	10	16%
Don't Know	7	11%	1	2%
Total Respondents	64	100%	64	100%

Fullness in the Tumor Side Ear

The following table illustrates the frequency with which respondents reported experiencing a feeling of fullness in their tumor side ear at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing a sensation of fullness in their tumor side ear with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	55	45%	40	33%
Daily (At least once a day)	16	13%	17	14%
Weekly (At least once a week)	21	17%	18	15%
Monthly (At least once a month)	7	6%	9	7%
Less frequent than once a month	14	11%	17	14%
I no longer experience fullness in the ear	1	1%	18	15%
Don't Know	8	7%	3	2%
Total Respondents	122	100%	122	100%

Difficulty Swallowing

The following table illustrates the frequency with which respondents reported experiencing difficulty swallowing related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty swallowing with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	3	17%	0	0%
Daily (At least once a day)	5	28%	3	17%
Weekly (At least once a week)	5	28%	3	17%
Monthly (At least once a month)	2	11%	5	28%
Less frequent than once a month	1	6%	4	22%
I no longer experience difficulty swallowing	1	6%	2	11%
Don't Know	1	6%	1	6%
Total Respondents	18	100%	18	100%

Difficulty Concentrating

The following table illustrates the frequency with which respondents reported experiencing difficulty concentrating at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty concentrating with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	7	15%	7	15%
Daily (At least once a day)	26	54%	20	42%
Weekly (At least once a week)	7	15%	12	25%
Monthly (At least once a month)	2	4%	4	8%
Less frequent than once a month	1	2%	2	4%
I no longer experience difficulty concentrating	0	0%	1	2%
Don't Know	5	10%	2	4%
Total Respondents	48	100%	48	100%

Fatigue

The following table illustrates the frequency with which respondents reported experiencing fatigue related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing fatigue related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	23	27%	15	18%
Daily (At least once a day)	33	39%	33	39%
Weekly (At least once a week)	16	19%	17	20%
Monthly (At least once a month)	3	4%	10	12%
Less frequent than once a month	2	2%	7	8%
I no longer experience fatigue	3	4%	2	2%
Don't Know	4	5%	0	0%
Total Respondents	84	100%	84	100%

Depression

The following table illustrates the frequency with which respondents reported experiencing depression at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing depression related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	12	31%	7	18%
Daily (At least once a day)	10	26%	11	28%
Weekly (At least once a week)	10	26%	6	15%
Monthly (At least once a month)	3	8%	8	21%
Less frequent than once a month	1	3%	2	5%
I no longer experience depression	1	3%	3	8%
Don't Know	2	5%	2	5%
Total Respondents	39	100%	39	100%

Memory Difficulties

The following table illustrates the frequency with which respondents reported experiencing memory difficulties related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing memory difficulties related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	9	15%	11	18%
Daily (At least once a day)	24	40%	18	30%
Weekly (At least once a week)	11	18%	17	28%
Monthly (At least once a month)	6	10%	4	7%
Less frequent than once a month	6	10%	5	8%
I no longer experience memory difficulties	1	2%	1	2%
Don't Know	3	5%	4	7%
Total Respondents	60	100%	60	100%

Post SSR Treatments / Rehabilitation Therapies

The following table illustrates the number of respondents receiving the following post-surgery treatments or rehabilitation therapies. Please keep in mind that respondents had the ability to choose multiple post-surgical treatments and rehabilitation therapies from the list below. The percentages listed are of the total 271 respondents, who indicated that they had undergone single dose stereotactic radiosurgery (SSR) to treat their tumor:

Surgery or treatment to correct facial weakness:	#	%
12-7 Anastomosis (transfer of the tongue nerve to the facial nerve, also called Hypoglossal-Facial Anastomosis)	2	1%
Cross face nerve graft	0	0%
Facial suspension or sling	3	1%
Face lift (tumor side)	0	0%
Face lift (both sides)	0	0%
Masseter muscle transposition	0	0%
Electrical stimulation of the face	2	1%
Other facial surgery	17	6%

Surgery to improve eyelid position and/or function:	#	%
Tarsorrhaphy (procedure in which lids are sewn together)	1	0%
Gold weight in eyelid	5	2%
Eyelid spring	2	1%
Lower eyelid repositioning	1	0%
Brow elevation	1	0%
Other eyelid surgery	14	5%

Treatment, physical therapy or training to improve:	#	%
Facial movement	8	3%
Balance	42	15%
Psychological issues	11	4%
Other treatment or therapy	28	10%

Hearing Improvement:	#	%
CROS hearing aid	10	4%
BiCROS hearing aid	3	1%
In-the-ear (ITE) hearing aid	13	5%
In-the-canal (ITC) hearing aid	2	1%
Bone Conduction Hearing Aid (like Baha® and TransEar®)	8	3%
FM system or other amplifier (carried in pocket or placed on a table)	3	1%
Device to amplify TV	7	3%
Device to amplify telephone	4	1%
Direct audio input microphone	1	0%
Other	23	8%

FRACTIONATED STEREOTACTIC RADIOSURGERY (FSR)

Of the 1,934 total respondents indicating that they were diagnosed with AN, 172¹⁴ respondents indicated having been treated via Fractionated Stereotactic Radiosurgery (FSR).

Date of Treatment

The following table indicates the time period during which treatment occurred:

Respondents indicated undergoing FSR during the following periods:	#	%
Prior to 1990	0	0%
Between 1991 and 1999	15	9%
Between 2000 and 2008	157	91%
Total	172	100%

Treating Physician / Institution

Respondents indicated that they were treated by several physicians at various institutions around the country and outside the U.S. The following table illustrates only those institutions cited by a minimum of 5 respondents.

Institution / Hospital	Location	Physicians listed by Respondents
Johns Hopkins	Baltimore, MD	Rigamonti, Williams
Massachusetts General Hospital / Brigham & Women's	Boston, MA	Loeffler
Staten Island Univ. Hospital / Cabrini Medical Center	New York, NY	Lederman
Stanford University Medical Center	Palo Alto, CA	Chang, Adler
Thomas Jefferson University Hospital	Philadelphia, PA	Andrews

Number of Fractions (Treatments) Received

The table below indicates the number of fractions (individual treatment sessions) that respondents indicated receiving during the course of their FSR treatment:

Number of treatments (fractions) reported by respondent	#	%
Fewer than 5 fractions	66	38%
Between 5 and 10 fractions	48	28%
Between 11 and 15 fractions	1	1%
Between 16 and 20 fractions	1	1%
Between 21 and 25 fractions	9	5%
Between 26 and 30 fractions	40	23%
More than 30 fractions	6	3%
Don't know how many fractions received	1	1%
Total	172	100%

¹⁴ Note that this figure includes those respondents indicating that they had received more than one treatment.

Duration of Treatment

The following table illustrates the period over which respondents reported receiving a course of FSR treatment:

Duration of treatment	#	%
Less than one week	77	45%
Between 1 and 2 weeks	31	18%
Between 2 and 3 weeks	1	1%
Between 3 and 4 weeks	5	3%
Between 4 and 5 weeks	22	13%
More than 5 weeks	36	21%
Total Respondents	172	100%

Post-Treatment Change in Tumor Size

The following table compares respondents' tumor size reported at diagnosis versus their tumor size as of their most recent, post-treatment MRI:

Tumor Size Reported at Initial Diagnosis vs. Post-Treatment	At Diagnosis		Post Treatment	
	#	%	#	%
0.1 - 0.4 cm	11	6%	97	56%
0.5 - 1.0 cm	32	19%	13	8%
1.1 - 1.5 cm	31	18%	21	12%
1.6 - 2.0 cm	35	20%	16	9%
2.1 - 2.5 cm	28	16%	6	3%
2.6 - 3.0 cm	13	8%	2	1%
3.1 - 3.5 cm	8	5%	2	1%
3.6 - 4.0 cm	1	1%	0	0%
> 4.0 cm	5	3%	1	1%
Don't Know	8	5%	14	8%
Total Respondents	172	100%	172	100%

Complications Reported

The following table illustrates certain complications reported by respondents. Respondents were able to select having experienced multiple complications so the percentages to the right indicate the number reported divided by the total number of respondents indicating they had undergone fractionated stereotactic radiosurgery (FSR) (172).

Respondents reported the following complications related to their treatment:	#	%
Cerebrospinal Fluid Leak (CSF Leak)	0	0%
Hydrocephalus (Water on the Brain)	5	3%
Wound infection	0	0%
Coma	3	2%
Intractable vertigo (sustained vertigo lasting longer than 30 days)	39	23%
Other	126	73%
No Complications	0	0%

Symptoms

The survey asked respondents to indicate which symptoms they had experienced as a result of their acoustic neuroma. Only those respondents who reported experiencing a specific symptom were queried about their experience with that symptom. Percentages reported below are out of the 271 respondents indicating they had undergone fractionated stereotactic radiosurgery (FSR) for their tumor.

The following table illustrates symptoms reported by respondents who were treated via FSR and that were experienced as a result of their tumor.

Symptoms reported by respondents treated via FSR :	#	%
Single-sided hearing loss or deafness	158	92%
Tinnitus (Noise or ringing in the ear)	142	83%
Vertigo (Dizziness/Balance Disturbance)	100	58%
Eye Problems	28	16%
Facial Weakness or Paralysis	19	11%
Headaches	39	23%
Fatigue	42	24%
Fullness in Ear	73	42%
Facial Numbness	31	18%
Memory Difficulties	37	22%
Change in Smell or Taste	27	16%
Depression	26	15%
Difficulty Concentrating	31	18%
Facial Twitching	37	22%
Difficulty Swallowing	14	8%

Hearing Statistics

The following table indicates the self-reported Gardner-Robertson Class of respondents who underwent FSR at the time of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below).

Respondents self-reported Gardner-Robertson Class who were treated via Fractionated Stereotactic Radiosurgery:	At Initial Onset		At Present	
	#	%	#	%
Class 1	42	27%	12	8%
Class 2	42	27%	29	18%
Class 3	12	8%	22	14%
Class 4	8	5%	28	18%
Class 5	3	2%	22	14%
Don't Know	51	32%	45	28%
Total	158	100%	158	100%

Gardner-Robertson Class Parameters
Class 1: (Good, Excellent Hearing = PTA 0-30 dB; SD 70-100%)
Class 2: (Serviceable Hearing = PTA 31-50 dB; SD 50-69%)
Class 3: (Non-Serviceable Hearing = PTA 51-90 dB; SD 5-49%)
Class 4: (Poor Hearing = PTA 91-100 dB; SD 1-4%)
Class 5: (No Hearing = PTA 0; SD 0%)

Legend
PTA = Pure Tone Average
dB = Decibels
SD = Speech Discrimination Score

Tinnitus

The following table illustrates the frequency with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	62	44%	99	70%
Daily (At least once a day)	29	20%	17	12%
Weekly (At least once a week)	23	16%	8	6%
Monthly (At least once a month)	8	6%	3	2%
Less frequent than once a month	4	3%	8	6%
I no longer experience tinnitus	0	0%	4	3%
Don't Know	16	11%	3	2%
Total Respondents	142	100%	142	100%

The following table illustrates the severity with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	2	1%	0	0%
9	0	0%	4	3%
8	8	6%	10	7%
7	11	8%	13	9%
6	9	6%	4	3%
5	16	11%	17	12%
4	20	14%	21	15%
3	36	25%	11	8%
2	25	18%	13	9%
1 (Least Severe / Mild)	15	11%	49	35%
Total Respondents	142	100%	142	100%

Vertigo / Balance Disturbance

The following table illustrates the frequency with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	23	23%	13	13%
Daily (At least once a day)	18	18%	12	12%
Weekly (At least once a week)	20	20%	13	13%
Monthly (At least once a month)	12	12%	9	9%
Less frequent than once a month	16	16%	25	25%
I no longer experience vertigo	1	1%	24	24%
Don't Know	10	10%	4	4%
Total Respondents	100	100%	100	100%

The following table illustrates the severity with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	8	8%	1	1%
9	9	9%	1	1%
8	6	6%	1	1%
7	8	8%	3	3%
6	3	3%	11	11%
5	14	14%	14	14%
4	12	12%	7	7%
3	21	21%	12	12%
2	12	12%	22	22%
1 (Least Severe / Mild)	7	7%	28	28%
Total Respondents	100	100%	100	100%

Facial Nerve Function

The following table indicates the self-reported House-Brackmann Grade of respondents at the date of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below):

Respondents self-reported House-Brackmann Grade at time of diagnosis and at time of survey:	At Initial Onset		At Present	
	#	%	#	%
Grade 1	12	63%	2	11%
Grade 2	2	11%	4	21%
Grade 3	0	0%	3	16%
Grade 4	1	5%	4	21%
Grade 5	1	5%	2	11%
Grade 6	0	0%	1	5%
Don't Know	3	16%	3	16%
Total Respondents	19	100%	19	100%

Definition of House-Brackmann Grades

Grade 1: Normal facial function in all areas.

Grade 2: Mild movement weakness, normal symmetry at rest. Slight weakness noticeable on close inspection; may have very slight synkinesis (inappropriate movement with voluntary movement of another muscle), moderate to good forehead motion, complete eye closure with minimum effort, only slight mouth disturbance.

Grade 3: Moderate dysfunction with noticeable asymmetry, good eye closure. Obvious but not disfiguring difference between two sides; noticeable but not severe synkinesis. Normal balance and tone at rest, slight to moderate movement of forehead, complete eye closure with effort, mouth movement slightly weak with maximum effort.

Grade 4: Moderately severe dysfunction with gross asymmetry and incomplete eye closure. Obvious facial weakness and/or disfiguring asymmetry with gross movement. Normal symmetry and tone at rest. No forehead movement on affected side, incomplete eye closure, mouth asymmetric with maximum effort.

Grade 5: Severe dysfunction with minimal facial movement. Only barely perceptible motion with attempted movement. Face unbalanced at rest. No forehead motion, incomplete eye closure. Slight mouth movement possible.

Grade 6: Complete paralysis. No movement.

Headaches

The following table illustrates the frequency with which respondents reported experiencing headaches related to their tumor at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	10	26%	4	10%
Daily (At least once a day)	12	31%	8	21%
Weekly (At least once a week)	11	28%	14	36%
Monthly (At least once a month)	2	5%	5	13%
Less frequent than once a month	1	3%	2	5%
I no longer experience headaches	0	0%	6	15%
Don't Know	3	8%	0	0%
Total Respondents	39	100%	39	100%

The following table illustrates the severity with which respondents reported experiencing headaches at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	3	8%	0	0%
9	2	5%	1	3%
8	5	13%	0	0%
7	6	15%	0	0%
6	7	18%	8	21%
5	2	5%	1	3%
4	5	13%	7	18%
3	4	10%	13	33%
2	4	10%	6	15%
1 (Least Severe / Mild)	1	3%	3	8%
Total Respondents	39	100%	39	100%

Eye Problems

The following table illustrates the frequency with which respondents reported experiencing eye problems related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing eye problems related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	15	54%	14	50%
Daily (At least once a day)	3	11%	7	25%
Weekly (At least once a week)	2	7%	4	14%
Monthly (At least once a month)	2	7%	0	0%
Less frequent than once a month	3	11%	0	0%
I no longer experience eye problems	0	0%	3	11%
Don't Know	3	11%	0	0%
Total Respondents	28	100%	28	100%

Changes in Sense of Taste or Smell

The following table illustrates the frequency with which respondents reported experiencing changes in their sense of taste or smell related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing changes in sense of Taste / smell with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	10	37%	11	41%
Daily (At least once a day)	8	30%	5	19%
Weekly (At least once a week)	3	11%	6	22%
Monthly (At least once a month)	1	4%	1	4%
Less frequent than once a month	0	0%	0	0%
I no longer experience changes in sense of smell or taste	2	7%	4	15%
Don't Know	3	11%	0	0%
Total Respondents	27	100%	27	100%

Facial Twitching

The following table illustrates the frequency with which respondents reported experiencing facial twitching related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial twitching related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	3	8%	1	3%
Daily (At least once a day)	12	32%	4	11%
Weekly (At least once a week)	10	27%	10	27%
Monthly (At least once a month)	4	11%	2	5%
Less frequent than once a month	4	11%	12	32%
I no longer experience facial twitching	1	3%	8	22%
Don't Know	3	8%	0	0%
Total Respondents	37	100%	37	100%

Facial Numbness

The following table illustrates the frequency with which respondents reported experiencing facial numbness related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial numbness related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	11	35%	13	42%
Daily (At least once a day)	9	29%	3	10%
Weekly (At least once a week)	5	16%	6	19%
Monthly (At least once a month)	1	3%	3	10%
Less frequent than once a month	3	10%	0	0%
I no longer experience facial numbness	2	6%	6	19%
Don't Know	0	0%	0	0%
Total Respondents	31	100%	31	100%

Fullness in the Tumor Side Ear

The following table illustrates the frequency with which respondents reported experiencing a feeling of fullness in their tumor side ear at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing a sensation of fullness in their tumor side ear with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	26	36%	19	26%
Daily (At least once a day)	13	18%	11	15%
Weekly (At least once a week)	16	22%	14	19%
Monthly (At least once a month)	9	12%	4	5%
Less frequent than once a month	2	3%	11	15%
I no longer experience fullness in the ear	0	0%	10	14%
Don't Know	7	10%	4	5%
Total Respondents	73	100%	73	100%

Difficulty Swallowing

The following table illustrates the frequency with which respondents reported experiencing difficulty swallowing related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty swallowing with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	5	36%	3	21%
Daily (At least once a day)	3	21%	2	14%
Weekly (At least once a week)	1	7%	2	14%
Monthly (At least once a month)	3	21%	5	36%
Less frequent than once a month	2	14%	1	7%
I no longer experience difficulty swallowing	0	0%	1	7%
Don't Know	0	0%	0	0%
Total Respondents	14	100%	14	100%

Difficulty Concentrating

The following table illustrates the frequency with which respondents reported experiencing difficulty concentrating at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty concentrating with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	5	16%	10	32%
Daily (At least once a day)	14	45%	7	23%
Weekly (At least once a week)	8	26%	11	35%
Monthly (At least once a month)	3	10%	1	3%
Less frequent than once a month	1	3%	0	0%
I no longer experience difficulty concentrating	0	0%	2	6%
Don't Know	0	0%	0	0%
Total Respondents	31	100%	31	100%

Fatigue

The following table illustrates the frequency with which respondents reported experiencing fatigue related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing fatigue related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	14	33%	11	26%
Daily (At least once a day)	9	21%	12	29%
Weekly (At least once a week)	12	29%	11	26%
Monthly (At least once a month)	3	7%	4	10%
Less frequent than once a month	3	7%	3	7%
I no longer experience fatigue	1	2%	1	2%
Don't Know	0	0%	0	0%
Total Respondents	42	100%	42	100%

Depression

The following table illustrates the frequency with which respondents reported experiencing depression at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing depression related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	11	42%	5	19%
Daily (At least once a day)	5	19%	3	12%
Weekly (At least once a week)	4	15%	6	23%
Monthly (At least once a month)	2	8%	6	23%
Less frequent than once a month	4	15%	4	15%
I no longer experience depression	0	0%	2	8%
Don't Know	0	0%	0	0%
Total Respondents	26	100%	26	100%

Memory Difficulties

The following table illustrates the frequency with which respondents reported experiencing memory difficulties related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing memory difficulties related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	5	14%	7	19%
Daily (At least once a day)	10	27%	17	46%
Weekly (At least once a week)	11	30%	7	19%
Monthly (At least once a month)	4	11%	2	5%
Less frequent than once a month	4	11%	3	8%
I no longer experience memory difficulties	1	3%	1	3%
Don't Know	2	5%	0	0%
Total Respondents	37	100%	37	100%

Post FSR Treatments / Rehabilitation Therapies

The following table illustrates the number of respondents receiving the following post-surgery treatments or rehabilitation therapies. Please keep in mind that respondents had the ability to choose multiple post-surgical treatments and rehabilitation therapies from the list below. The percentages listed are of the total 172 respondents, who indicated that they had undergone fractionated stereotactic radiosurgery (FSR) to treat their tumor:

Surgery or treatment to correct facial weakness:	#	%
12-7 Anastomosis (transfer of the tongue nerve to the facial nerve, also called Hypoglossal-Facial Anastomosis)	1	1%
Cross face nerve graft	0	0%
Facial suspension or sling	3	2%
Face lift (tumor side)	4	2%
Face lift (both sides)	0	0%
Masseter muscle transposition	0	0%
Electrical stimulation of the face	2	1%
Other facial surgery	4	2%

Surgery to improve eyelid position and/or function:	#	%
Tarsorrhaphy (procedure in which lids are sewn together)	3	2%
Gold weight in eyelid	4	2%
Eyelid spring	2	1%
Lower eyelid repositioning	2	1%
Brow elevation	1	1%
Other eyelid surgery	5	3%

Treatment, physical therapy or training to improve:	#	%
Facial movement	7	4%
Balance	25	15%
Psychological issues	7	4%
Other treatment or therapy	7	4%

Hearing Improvement:	#	%
CROS hearing aid	1	1%
BiCROS hearing aid	2	1%
In-the-ear (ITE) hearing aid	17	10%
In-the-canal (ITC) hearing aid	5	3%
Bone Conduction Hearing Aid (like Baha® and TransEar®)	4	2%
FM system or other amplifier (carried in pocket or placed on a table)	0	0%
Device to amplify TV	8	5%
Device to amplify telephone	1	1%
Direct audio input microphone	0	0%
Other	11	6%

WATCH & WAIT / OBSERVATION (W&W)

Of the 1,934 total respondents indicating that they were diagnosed with AN, 380 respondents indicated that they had **NOT** been treated at the time of the survey and are watching and waiting (W&W).

Change in Tumor Size

Of the 380 respondents who indicated being diagnosed with acoustic neuroma and who have not yet sought treatment, 87 (23%) reported a change in size of their tumor since they were initially diagnosed versus 293 (77%) who indicated no change in the size of their tumor. Additionally, the average time elapsed between initial diagnosis and the most recent MRI reported by this group was 4.2 years.

Symptoms

The survey asked respondents to indicate which symptoms they had experienced as a result of their acoustic neuroma. Only those respondents who reported experiencing a specific symptom were queried about their experience with that symptom. Percentages reported below are out of the 380 respondents indicating they have not received treatment for their tumor as of the date of the survey.

The following table illustrates symptoms reported by respondents who are watching and waiting and that were experienced as a result of their tumor.

Symptoms reported by respondents who are watching and waiting:	#	%
Single-sided hearing loss or deafness	287	76%
Tinnitus (Noise or ringing in the ear)	279	73%
Vertigo (Dizziness/Balance Disturbance)	198	52%
Eye Problems	45	12%
Facial Weakness or Paralysis	39	10%
Headaches	82	22%
Fatigue	80	21%
Fullness in Ear	158	42%
Facial Numbness	40	11%
Memory Difficulties	63	17%
Change in Smell or Taste	28	7%
Depression	48	13%
Difficulty Concentrating	41	11%
Facial Twitching	33	9%
Difficulty Swallowing	16	4%

Hearing Statistics

The following table indicates the self-reported Gardner-Robertson Class of respondents who were watching and waiting at the time of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below).

Respondents self-reported Gardner-Robertson Class who were watching and waiting as of the date of this survey:	At Initial Onset		At Present	
	#	%	#	%
Class 1	47	16%	23	8%
Class 2	44	15%	30	10%
Class 3	33	11%	39	14%
Class 4	14	5%	17	6%
Class 5	17	6%	53	18%
Don't Know	132	46%	125	44%
Total	287	100%	287	100%

Gardner-Robertson Class Parameters
Class 1: (Good, Excellent Hearing = PTA 0-30 dB; SD 70-100%)
Class 2: (Serviceable Hearing = PTA 31-50 dB; SD 50-69%)
Class 3: (Non-Serviceable Hearing = PTA 51-90 dB; SD 5-49%)
Class 4: (Poor Hearing = PTA 91-100 dB; SD 1-4%)
Class 5: (No Hearing = PTA 0; SD 0%)

Legend
PTA = Pure Tone Average
dB = Decibels
SD = Speech Discrimination Score

Tinnitus

The following table illustrates the frequency with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	109	39%	186	67%
Daily (At least once a day)	68	24%	45	16%
Weekly (At least once a week)	43	15%	19	7%
Monthly (At least once a month)	11	4%	10	4%
Less frequent than once a month	11	4%	4	1%
I no longer experience tinnitus	3	1%	9	3%
Don't Know	34	12%	6	2%
Total Respondents	279	100%	279	100%

The following table illustrates the severity with which respondents reported experiencing tinnitus at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing tinnitus with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	3	1%	8	3%
9	5	2%	7	3%
8	10	4%	15	5%
7	16	6%	36	13%
6	17	6%	25	9%
5	33	12%	32	11%
4	52	19%	27	10%
3	56	20%	28	10%
2	41	15%	32	11%
1 (Least Severe / Mild)	46	16%	69	25%
Total Respondents	279	100%	279	100%

Vertigo / Balance Disturbance

The following table illustrates the frequency with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	24	12%	27	14%
Daily (At least once a day)	40	20%	41	21%
Weekly (At least once a week)	29	15%	30	15%
Monthly (At least once a month)	30	15%	22	11%
Less frequent than once a month	56	28%	45	23%
I no longer experience vertigo	1	1%	28	14%
Don't Know	18	9%	5	3%
Total Respondents	198	100%	198	100%

The following table illustrates the severity with which respondents reported experiencing vertigo / balance disturbance at the date of its initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing vertigo / balance disturbance with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	23	12%	5	3%
9	12	6%	4	2%
8	12	6%	4	2%
7	11	6%	11	6%
6	10	5%	24	12%
5	16	8%	37	19%
4	18	9%	21	11%
3	35	18%	34	17%
2	22	11%	27	14%
1 (Least Severe / Mild)	39	20%	31	16%
Total Respondents	198	100%	198	100%

Facial Nerve Function

The following table indicates the self-reported House-Brackmann Grade of respondents at the date of their diagnosis and at the date they completed the survey (denoted “At Present” in the table below):

Respondents self-reported House-Brackmann Grade at time of diagnosis and at time of survey:	At Initial Onset		At Present	
	#	%	#	%
Grade 1	24	62%	5	13%
Grade 2	8	21%	14	36%
Grade 3	1	3%	9	23%
Grade 4	1	3%	4	10%
Grade 5	0	0%	0	0%
Grade 6	0	0%	2	5%
Don't Know	5	13%	5	13%
Total Respondents	39	100%	39	100%

Definition of House-Brackmann Grades
Grade 1: Normal facial function in all areas.
Grade 2: Mild movement weakness, normal symmetry at rest. Slight weakness noticeable on close inspection; may have very slight synkinesis (inappropriate movement with voluntary movement of another muscle), moderate to good forehead motion, complete eye closure with minimum effort, only slight mouth disturbance.
Grade 3: Moderate dysfunction with noticeable asymmetry, good eye closure. Obvious but not disfiguring difference between two sides; noticeable but not severe synkinesis. Normal balance and tone at rest, slight to moderate movement of forehead, complete eye closure with effort, mouth movement slightly weak with maximum effort.
Grade 4: Moderately severe dysfunction with gross asymmetry and incomplete eye closure. Obvious facial weakness and/or disfiguring asymmetry with gross movement. Normal symmetry and tone at rest. No forehead movement on affected side, incomplete eye closure, mouth asymmetric with maximum effort.
Grade 5: Severe dysfunction with minimal facial movement. Only barely perceptible motion with attempted movement. Face unbalanced at rest. No forehead motion, incomplete eye closure. Slight mouth movement possible.
Grade 6: Complete paralysis. No movement.

Headaches

The following table illustrates the frequency with which respondents reported experiencing headaches related to their tumor at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	7	9%	10	12%
Daily (At least once a day)	22	27%	21	26%
Weekly (At least once a week)	24	29%	28	34%
Monthly (At least once a month)	12	15%	5	6%
Less frequent than once a month	11	13%	9	11%
I no longer experience headaches	0	0%	8	10%
Don't Know	6	7%	1	1%
Total Respondents	82	100%	82	100%

The following table illustrates the severity with which respondents reported experiencing headaches at the date of their initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing headaches with the following severity on a scale of 1 (mild) - 10 (most severe):	At Initial Onset		At Present	
	#	%	#	%
10 (Most Severe / Disabling)	5	6%	5	6%
9	6	7%	0	0%
8	7	9%	4	5%
7	8	10%	4	5%
6	11	13%	13	16%
5	16	20%	16	20%
4	6	7%	8	10%
3	10	12%	15	18%
2	6	7%	7	9%
1 (Least Severe / Mild)	7	9%	10	12%
Total Respondents	82	100%	82	100%

Eye Problems

The following table illustrates the frequency with which respondents reported experiencing eye problems related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing eye problems related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	6	13%	13	29%
Daily (At least once a day)	10	22%	18	40%
Weekly (At least once a week)	8	18%	4	9%
Monthly (At least once a month)	7	16%	1	2%
Less frequent than once a month	4	9%	8	18%
I no longer experience eye problems	3	7%	1	2%
Don't Know	7	16%	0	0%
Total Respondents	45	100%	45	100%

Changes in Sense of Taste or Smell

The following table illustrates the frequency with which respondents reported experiencing changes in their sense of taste or smell related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing changes in sense of taste / smell with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	8	29%	11	39%
Daily (At least once a day)	5	18%	5	18%
Weekly (At least once a week)	2	7%	3	11%
Monthly (At least once a month)	2	7%	3	11%
Less frequent than once a month	5	18%	1	4%
I no longer experience changes in sense of smell or taste	1	4%	4	14%
Don't Know	5	18%	1	4%
Total Respondents	28	100%	28	100%

Facial Twitching

The following table illustrates the frequency with which respondents reported experiencing facial twitching related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial twitching related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	3	9%	2	6%
Daily (At least once a day)	8	24%	7	21%
Weekly (At least once a week)	7	21%	8	24%
Monthly (At least once a month)	2	6%	5	15%
Less frequent than once a month	8	24%	5	15%
I no longer experience facial twitching	1	3%	5	15%
Don't Know	4	12%	1	3%
Total Respondents	33	100%	33	100%

Facial Numbness

The following table illustrates the frequency with which respondents reported experiencing facial numbness related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing facial numbness related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	10	25%	12	30%
Daily (At least once a day)	10	25%	8	20%
Weekly (At least once a week)	4	10%	5	13%
Monthly (At least once a month)	5	13%	4	10%
Less frequent than once a month	4	10%	4	10%
I no longer experience facial numbness	1	3%	5	13%
Don't Know	6	15%	2	5%
Total Respondents	40	100%	40	100%

Fullness in the Tumor Side Ear

The following table illustrates the frequency with which respondents reported experiencing a feeling of fullness in their tumor side ear at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing a sensation of fullness in their tumor side ear with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	51	32%	60	38%
Daily (At least once a day)	28	18%	32	20%
Weekly (At least once a week)	28	18%	22	14%
Monthly (At least once a month)	9	6%	16	10%
Less frequent than once a month	21	13%	13	8%
I no longer experience fullness in the ear	1	1%	10	6%
Don't Know	20	13%	5	3%
Total Respondents	158	100%	158	100%

Difficulty Swallowing

The following table illustrates the frequency with which respondents reported experiencing difficulty swallowing related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty swallowing with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	1	6%	3	19%
Daily (At least once a day)	6	38%	4	25%
Weekly (At least once a week)	3	19%	4	25%
Monthly (At least once a month)	1	6%	2	13%
Less frequent than once a month	4	25%	2	13%
I no longer experience difficulty swallowing	0	0%	1	6%
Don't Know	1	6%	0	0%
Total Respondents	16	100%	16	100%

Difficulty Concentrating

The following table illustrates the frequency with which respondents reported experiencing difficulty concentrating at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing difficulty concentrating with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	3	7%	7	17%
Daily (At least once a day)	14	34%	19	46%
Weekly (At least once a week)	11	27%	6	15%
Monthly (At least once a month)	4	10%	2	5%
Less frequent than once a month	5	12%	5	12%
I no longer experience difficulty concentrating	0	0%	0	0%
Don't Know	4	10%	2	5%
Total Respondents	41	100%	41	100%

Fatigue

The following table illustrates the frequency with which respondents reported experiencing fatigue related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing fatigue related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	13	16%	23	29%
Daily (At least once a day)	22	28%	30	38%
Weekly (At least once a week)	31	39%	18	23%
Monthly (At least once a month)	6	8%	6	8%
Less frequent than once a month	5	6%	2	3%
I no longer experience fatigue	0	0%	1	1%
Don't Know	3	4%	0	0%
Total Respondents	80	100%	80	100%

Depression

The following table illustrates the frequency with which respondents reported experiencing depression at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing depression related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	13	27%	11	23%
Daily (At least once a day)	15	31%	12	25%
Weekly (At least once a week)	9	19%	10	21%
Monthly (At least once a month)	5	10%	8	17%
Less frequent than once a month	3	6%	4	8%
I no longer experience depression	0	0%	2	4%
Don't Know	3	6%	1	2%
Total Respondents	48	100%	48	100%

Memory Difficulties

The following table illustrates the frequency with which respondents reported experiencing memory difficulties related to their tumor at the date of initial onset and at the date they completed the survey (denoted “At Present” in the table below):

Respondents reported experiencing memory difficulties related to their tumor with the following frequency:	At Initial Onset		At Present	
	#	%	#	%
Constantly	5	8%	9	14%
Daily (At least once a day)	16	25%	34	54%
Weekly (At least once a week)	16	25%	9	14%
Monthly (At least once a month)	8	13%	6	10%
Less frequent than once a month	9	14%	2	3%
I no longer experience memory difficulties	0	0%	1	2%
Don't Know	9	14%	2	3%
Total Respondents	63	100%	63	100%

Rehabilitation Therapies

The following table illustrates the number of respondents receiving the following post-surgery treatments or rehabilitation therapies. Please keep in mind that respondents had the ability to choose multiple post-surgical treatments and rehabilitation therapies from the list below. The percentages listed are of the total 380 respondents, indicated that they had not yet received treatment for their tumor (were watching and waiting):

Surgery or treatment to correct facial weakness:	#	%
12-7 Anastomosis (transfer of the tongue nerve to the facial nerve, also called Hypoglossal-Facial Anastomosis)	0	0%
Cross face nerve graft	0	0%
Facial suspension or sling	0	0%
Face lift (tumor side)	0	0%
Face lift (both sides)	0	0%
Masseter muscle transposition	0	0%
Electrical stimulation of the face	0	0%
Other facial surgery	0	0%

Surgery to improve eyelid position and/or function:	#	%
Tarsorrhaphy (procedure in which lids are sewn together)	0	0%
Gold weight in eyelid	0	0%
Eyelid spring	0	0%
Lower eyelid repositioning	0	0%
Brow elevation	0	0%
Other eyelid surgery	0	0%

Treatment, physical therapy or training to improve:	#	%
Facial movement	0	0%
Balance	0	0%
Psychological issues	1	0%
Other treatment or therapy	0	0%

Hearing Improvement:	#	%
CROS hearing aid	1	0%
BiCROS hearing aid	0	0%
In-the-ear (ITE) hearing aid	0	0%
In-the-canal (ITC) hearing aid	0	0%
Bone Conduction Hearing Aid (like Baha® and TransEar®)	1	0%
FM system or other amplifier (carried in pocket or placed on a table)	0	0%
Device to amplify TV	0	0%
Device to amplify telephone	0	0%
Direct audio input microphone	0	0%
Other	1	0%