FINAL TRANSCRIPT

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PRESENTATION

Operator

My name is May and I will be your conference facilitator today for Amgen's investor community conference call. (Operator Instructions). I would now like to introduce Arvind Sood, Vice President of Investor Relations. Mr. Sood, you may now begin

your conference.

Arvind Sood - *Amgen - VP, IR*

Good afternoon everybody, and I would like to thank you for joining us on short notice. The purpose of the call today is to review the announcement that we made earlier regarding a restructuring plan that will position our Company for future growth. Join me on the call today is Kevin Sharer, our Chairman and CEO; George Morrow, our Executive VP of Global Commercial Operations; Bob Bradway, our Chief Financial Officer; and Roger Perlmutter, our Executive VP of R&D.

Let me just briefly outline the agenda for this call. Kevin will begin with a strategic overview of our corporate restructuring plan. Next, George will describe how the national coverage decision that we will refer to throughout the call as NCD is likely to impact Aranesp revenues in oncology within the US. Bob will then discuss specific elements of our restructuring program as well as provide guidance for 2007. After the formal remarks, we will open the call for your questions regarding this announcement.

Given the high level of anticipation that preceded this call, I suspect that there will be a lot of questions. Just to be sure that everyone has an opportunity to address their issues, I would like to request that you limit yourself to only one question. In the interest of time, I would also like to ask that we stay focused on the topic at hand and not deviate to other issues which may be product or pipeline specific, as we will have other opportunities to address such issues.

The slides that we will use for our presentation are posted on our website and a link was also sent separately by e-mail to the investment community. So, before we start, I have to mention our customary disclaimer that through the course of this call, we will make certain forward-looking statements. And of course, actual results can vary materially.

So, with that, I would like to turn the call over to Kevin.

Kevin Sharer - *Amgen - Chairman, CEO*

Thank you. Good afternoon. We have a high level of interest in the call today, and we know there are many Amgen staff, media and other interested parties listening in besides the 200 or so investors and analysts who are connected in two-way mode. I would like to welcome all.

Our press release today describes Amgen's restructuring plan. This restructuring plan is triggered by both changes in our ESA business that began in the first quarter of 2007 and the new CMS oncology coverage rules for Medicare recipients announced at the end of last month. We believe the national coverage determination issued by CMS is arbitrary, far more restrictive than the FDA-approved label, without apparent clinical or policy rationale and most importantly bad for patients. We will continue to work tirelessly to modify this decision. That said, prudence dictates that our financial plans assume that both the new rule and the regulatory changes to our ESA labels made earlier this year will continue to adversely affect our business.

First, some words on 2007 EPS guidance. Our new range is $4.13 to $4.23, which is a change from our prior guidance of $4.28. This new EPS range for 2007 anticipates lower Aranesp sales going forward. And the width of the new range reflects the difficulty in precisely judging current revenue trends amidst much uncertainty.

We will know more by our third-quarter call in late October. George later in the call will share our logic and judgment in projecting future Aranesp use. It's not easy to do so since there's absolutely no clinical experience in managing hemoglobins in the manner the new federal rules dictate and numerous implementation questions remain.

Let's now turn to the restructuring. Earlier this year, we began to take cost management actions to dramatically slow expense growth. I'm proud of how effectively my Amgen colleagues tackled this challenge given the high fixed cost and long life cycle nature of our industry. However, recent events compel us to modify our plans and now we must do more.

We will focus on critical objectives as we execute the restructuring program. First, fulfill our mission of serving patients, both current and future patients. This means our manufacturing system must remain reliable, flexible, and efficient. We also must keep investing in and assuring proper development progress of our pipeline, which holds so much promise for patients suffering from grievous illness.

Two, deliver for investors in the near and longer term. Amgen's recent stock performance has been disappointing. We have experienced dips like this before that were triggered by external events and we recovered. We're more determined than ever to deliver for shareholders.

There are critical uncertainties likely to play out in 2007 that affect our outlook, including implementation of the CMS coverage decision, the outcome of the peg-EPO trial and the implications arising from the FDA Cardiorenal Advisory Panel focused on use of ESAs in nephrology that will be held in September. Here are our views on those issues.

The peg-EPO trial begins in early September and ends in mid-October. We remain confident in our intellectual property position and look forward to our day in court. As I said, we believe the NCD decision is terribly wrong for patients and we will continue to seek ways to change the outcome. That said, the NCD will impact revenue and we assume for planning purposes it remains.

Three, the Cardiorenal Advisory Panel will meet in September. We believe the data in nephrology are clear and that current dosing practices deliver the right outcomes for patients. Despite these uncertainties, we believe the restructuring changes announced today will position Amgen for success in 2008 and beyond and will help us deliver for shareholders. We also expect to be in a position to provide a clearer picture about future expectations in our third-quarter earnings call as these uncertainties are resolved.

Our restructuring plan will deliver the following. First, size manufacturing to our current demand and pipeline view with enough flexibility to respond to changing circumstances. This means we will close certain production operations and rationalize facilities to achieve improved efficiencies.

Two, continue to invest in the pipeline to complete our robust clinical trial program while funding a healthy discovery research effort and maintaining the ability to continue our outreach programs. We will reduce R&D as a percent of sales in 2008 compared to past levels. And longer-term, we will target on the order of a 20% of sales investment level for R&D.

Next, reduce staff. The restructuring plan will reduce staff on the order of 12% to 14% or about 2200 to 2600 staff. This will improve the efficiency of our operations and reflects our priorities going forward.

Next, deliver for shareholders. This is very important and we know it. Do not interpret its importance by order of mention. We're taking significant steps to reduce costs and avoid planned expenses. As we told you in May, we have reduced or avoided costs in 2007 versus our prior plan of between $600 million to $800 million. In 2008, we will reduce or avoid costs versus our prior plan of between 1 to $1.3 billion.

These cuts are significant and they need to be in part to offset the increased cost of our changing product mix due to the reduction in Aranesp revenues. In addition, planned savings and cost of sales will not be fully reflected in 2008 because a portion of the inventory will have been produced before the planned savings were implemented.

We're also taking steps to reduce capital expenses and thereby increase cash flow in 2007 and 2008 by a total of $1.9 billion compared to plan. Bob Bradway will review these cost and capital expense changes in greater detail later in the call. While we believe we're taking appropriate action with respect to managing the business, we will continue to closely monitor revenue and will take further actions as may be appropriate in light of developments.

Our final objective is to live our values and treat our staff with honesty, respect, and fairness. Downsizing is one of, if not the most difficult, things a company can do. We do not take it lightly and are deeply saddened by our need to do this. We have

added 13,000 people to Amgen since 2001 and returning to 2006 levels is not easy. We will starting in the coming days announce a voluntary transition program that will be available to the longer serving members of our staff. We expect in the fall to complete the process with a targeted reduction in force.

This has not been an easy year or the one we expected. Great companies announce themselves in times of trial. We have proven ourselves in times of plenty and I know we will continue to do so in this time of trial. My deepest appreciation to my Amgen colleagues for all you have and continue to do in working tirelessly for patients during this difficult time. Thank you.

Now, I will turn the call over to George and Bob to share more details before we take your questions. George?

George Morrow - *Amgen - EVP, Global Commercial Operations*

So I'm going to spend some time describing how the NCD as currently proposed is likely to impact Aranesp revenues and oncology in the US. As Kevin mentioned, modeling the impact of the NCD on ESA utilization is challenging, due to the lack of clinical trial or real world experience in withholding treatment at a hemoglobin level of 10.

Furthermore, CMS has not provided clear direction to Medicare contractors or oncologists on key aspects of operationalizing the policy. For example, the frequency of hemoglobin monitoring and evaluating hemoglobin response when blood transfusions and ESAs are giving temporarily.

To frame the range of outcomes, we developed a model that attempts to roughly quantify the effects of the NCD on ESA treatment opportunities. And by treatment opportunities, I mean the number of patients treated and the number of doses they receive per treatment course. Our current Medicare CIA business at steady-state at the end of 2006 reflects our starting base. We are also assuming in the model that CMS implements the final NCD that was released on July 30 despite the significant opposition that has been raised by professional and patient societies.

I will begin on slide 4 by reminding you of the anatomy of our Aranesp sales using 2006 as a starting point. 2006 Aranesp sales totaled $4.1 billion, of which 2.8 billion were derived in the United States. 2.1 billion of these US sales were in the oncology setting. And within the 2.1 billion in oncology sales, 1.4 billion was used in chemotherapy-induced anemia, or CIA; approximately 500 million in patients with anemia of cancer, or AOC, and approximately 200 million in patients with myelodysplastic syndrome, or MDS.

It's important to note that the NCD specifically impacts Medicare patients only, and we have indicated here the approximate proportion of our sales they can afford by Medicare. The NCD directly affects the oncology business in two ways, by not covering AOC and putting in place restrictions on the use of ESA and CIA for the Medicare population. The NCD did not make any determination on coverage for MDS and so the decision on whether MDS is covered remains within the local Medicare carriers.

Next slide, there are significant patient care implications as a direct result of the NCD. These are our top concerns. First, not reimbursing ESAs until a hemoglobin is less than 10 grams per deciliter will increase the number of transfusions needed compared to today's standard of care. It is well-documented that initiating ESA therapy when a hemoglobin is less than 10 increases by 50% the risk of needing a transfusion compared to on-time treatment. I will show you the data that supports that statement in a few moments. Not covering hemoglobin levels above 10 will add to this transfusion risk.

Secondly, the response criteria defined by the rate of hemoglobin rise over time -- that is to say less than 1 gram rise in eight weeks -- will misclassify nonresponders and disregard the benefit of maintaining hemoglobin in the face of toxic myelosuppressive chemotherapy.

Finally, the onetime dose escalation of 25% in the NCD has no basis in clinical trial evidence as it has never been studied, is likely to provide suboptimal care and potentially leads to patients being artificially classified as nonresponders. Like many other elements of the NCD, it is inconsistent with the FDA-approved label. Next slide.

The way ESAs were designed to be used and have been used successfully over the years is to correct chemotherapy-induced anemia once it has occurred and then maintain a patient's hemoglobin within a target range to prevent the need for red blood cell transfusions. This is illustrated graphically on slide 6 for a single patient. The NCD makes its tried and tested treatment paradigm a thing of the past for Medicare beneficiaries. I will show you what the new hemoglobin curve might look like in a moment. Next slide.

Before that, let's look at some of the critical assumptions that will determine the impact of the NCD. Now these numbers largely speaking were derived from data from 10,000 patients in 30 chemotherapy-induced anemia clinical trials using Aranesp. First, what is the distribution of patients' hemoglobin after they have received at least one cycle of chemotherapy? Based on our clinical studies, approximately 60% of the patients are greater than or equal to 10 and hence about 40% of the patients are below 10 when they are initiated after one cycle of chemo.

The next critical question is, what percentage of patients with a hemoglobin above 10 grams per deciliter will eventually fall below 10 grams per deciliter in the face of continued myelosuppressive chemotherapy if not treated with an ESA? Based on an analysis of the many clinical trials we've done in this area, we estimate that about 80% -- 80% of patients' hemoglobins will eventually fall below 10 grams per deciliter, making them eligible for ESA treatment under the new NCD.

For their hemoglobin to fall below 10, we estimate they will take a median time of six weeks. When these patients are subsequently initiated with an ESA, it will take a median time of approximately four weeks for the hemoglobin level to go above 10 grams per deciliter.

At this point, the NCD rule states that ESA therapy is now no longer necessary and reasonable. We have never studied withholding an ESA use above 10, so it will be difficult to forecast exactly how many of these patients' hemoglobins will eventually fall back to 10 -- below 10. But we suspect in the face of ongoing myelosuppressive chemotherapy, it is likely that the majority of them will and that it will happen relatively quickly on the order of three weeks.

Finally, how many patients will be deemed nonresponders according to the NCD? We estimate a little more than one-third.

The next slide is slide 9. This graphic illustrates how some of these assumptions might impact the care of one Medicare patient. In the post NCD world, Medicare patients will now have to wait until their hemoglobin is below 10 before they are eligible for treatment. This, by itself, increases the likelihood that patients will require a red blood cell transfusion. Once their hemoglobin rises after being administered an ESA and exceeds 10, they will no longer be eligible to receive an ESA. This will almost inevitably lead to their hemoglobin once more falling below 10. At which point, they will once again be eligible to receive ESA therapy.

So, this gives you a conceptual framework for how we're thinking about the impact of the NCD on Medicare patients. Of course, the shape of these curves will differ based on a patient variability.

The next slide provides a summary of our estimate of the impact that the NCD will have on Medicare CIA Aranesp business. Since we have no actual clinical data that derives from the NCD treatment rule, forecasting ultimate utilization is challenging at best. Nevertheless, in our internal model, we considered many different patient profiles characterized by how they present at initiation and by how they respond to Aranesp treatment.

Again, we're estimating the NCD effect on the number of patients treated and the number of doses administered relative to 2006, assuming that dose, price, and share are all relatively constant. This table consolidates that work. What it shows is, for the 10 to 15% of currently-treated patients that are above or equal to 10 in initiation of chemo and remain above 10 for the duration of their treatment, we expect to lose 100% of those treatment opportunities. For the 10 to 15% of currently-treated sub 10

patients who do not achieve the NCD required rate of rise in the required timeframe, roughly one-half of our treatment opportunities will be lost. For the other 70 to 80% of currently-treated patients who are treated and bounce above and below 10, we estimate that roughly two-thirds of our treatment opportunities will be lost.

As you can see, we expect a significant impact to our Medicare CIA business. But let me remind you that this represented about 40% of our total US CIA business in 2006 and about 30% of our total US oncology business. Next slide is 11.

To summarize, we expect the reimbursement changes that have occurred in 2007 will have the following directional impact. Our AOC sales have been and will continue to be negatively impacted as reimbursement has been withdrawn from Medicare beneficiaries. This impact began occurring in the second quarter of 2007 and will be reinforced by the NCD. We will continue to realize some sales in AOC as many commercial payers recognize the unmet need in this population.

In addition, in the past, anemia cancer was sometimes used as a code of convenience and used whenever there was some diagnostic uncertainty. We believe providers may now be more discriminating in attributing diagnosis and reimbursement coating.

The NCD will negatively affect the care given to Medicare beneficiaries with CIA and consequently Aranesp sales as I have previously described. We believe private payers will take a more considered approach to any reimbursement changes and follow established treatment guidelines, such as those published by ASCO/ASH and NCCN. The NCD does not directly affect MDS and we expect reimbursement to remain in place for this important patient group.

The next slide is number 12. The reactions of key stakeholders in the oncology community reflect the unprecedented nature of treatment changes driven by CMS's actions. Concern, anger, and confusion are the prevailing sentiments. Sadly, we foresee community oncologists in the mainstream developing separate Medicare and commercial treatment paradigms.

Next slide is number 13. So, how likely is the NCD to cause a substantial increase in the number of transfusions? The chart on the right is from an Amgen trial which compared on-time initiation of Aranesp and that's to say the Aranesp was initiated at a hemoglobin of between 10.5 and 12 to late initiation where the hemoglobin was below 10 before Aranesp was initiated. On-time intervention led to a 50% reduction in transfusions in this trial.

In addition to being symptomatically anemic throughout their chemotherapy, Medicare patients will likely experience more transfusions than necessary as well as to have to leaving the care of the local physician and traveling to hospitals to receive blood. And that can easily take a full day. The effect of the NCD on the nation's blood supply will be watched closely by various stakeholders and depending on the outcome potentially form the basis of a reconsideration of the NCD down the road.

To finish up on the last slide, various stakeholders including Amgen are working closely with the CMS to address the provisions in the NCD that could have serious detrimental consequences to patient care. Various stakeholders have presented several options -- withdraw specific provisions and finalize the remainder, reopen NCD and delay implementation, and reconsider NCD in an expedited fashion. They and we believe that CMS has the authority to modify the NCD or to withdraw it and issue another that resolves contentious provisions. We hope CMS will listen to and act on the significant concerns expressed by the oncology community. Bob?

Bob Bradway - *Amgen - CFO*

As Kevin noted at the outset, our restructuring plan is triggered by both changes in our ESA business that began in the first quarter and the new CMS oncology coverage rules that were announced at the end of July. So if you turn to page -- or slide 15, I would like to take you through the key elements of our restructuring plan.

As you can see, the pretax charges associated with our restructuring plan are expected to be in the range of 6 to $700 million. Nearly all of these charges will occur in the calendar year 2007 with a small piece in 2008. These charges include the $289 million charge that we took in the second quarter of this year for asset impairment or related costs. And half of the 6 to $700 million charges are expected to be noncash in nature.

The initiatives reflected in this charge include reducing the Company's staff by 12% to 14% or 2200 to 2600 people as you've heard us say. They include rationalizing certain of our facilities and slowing down our planned expansion of others. And they include reducing our planned capital expenditures over the two year period by $1.9 billion.

Now, as you may recall in the first-quarter earnings conference call in April, we told you that we would reduce 2007 capital expenditures to be in line with prior years. And these actions are included in this more comprehensive decision about our capital portfolio. These initiatives will deliver operational efficiencies while ensuring continued investment in research and development and our operational priorities. They yield 2007 cost savings versus prior plans of 6 to $800 million as we have previously announced. And they yield cost savings versus our prior plans of between 1 billion and 1.3 billion for 2008 and annually thereafter. And they have a favorable impact to our planned cash flow of over $2 billion for the period again 2007 and 2008.

Now, turning to guidance on slide 16. As you recall in our second-quarter earnings call, we held guidance consistent at $4.28, including the $0.02 impact from the acquisitions of Ilypsa and Alantos. At the time, we didn't have the results of the NCD and we indicated that an update would likely be necessary once we had received it. And based on the expected impact of the NCD on our ESA franchise and given the restructuring steps we have taken, we are updating our adjusted EPS guidance to a range of $4.13 to $4.23, down from $4.28.

So, as you heard from George's remarks, we expect to see the incremental impact of the NCD on our Aranesp sales in the second half of 2007. The components are likely to include as you heard in his remarks, substantial impact in the US Medicare portion of the CIA indication. We are expecting that the commercial players will reflect a more considered approach to treatment. We are expecting limited effect at this point on our international Aranesp sales and that's what we have seen to date. We are expecting stability in the MDS setting.

And obviously, we will provide more clarity around revenues when we gather for the third-quarter earnings call in October. At that time, we will have a better sense of the Aranesp sales trends in oncology. We should know about the outcome of CRDAC and we may also have some insight into the outcome of the peg-EPO trial against Roche.

Now if we turn to slide 17, it is not my intention to get into a conversation about guidance for 2008. And we will address 2008 guidance as is our custom on the fourth-quarter call in January. But I do want to make sure we are all on the same page as we look to the future and give you a sense for where we believe the business is heading after taking into account the initiatives we have discussed today.

Again, first of all, keep in mind that the full year impact to Aranesp revenues from the label change, NCD and other key events will be realized in 2008. In other words, 2007 will be a transition year and in 2008 we will see the full year effects. At the same time, we continue to expect growth from our filgrastim, Enbrel and Sensipar franchises.

So, turning to expense trends, bear in mind that we will have a couple of pieces moving up being offset by a number moving down. In terms of cost of goods as a percentage of sales, we would expect to see a slight increase in cost of goods due to product mix as Aranesp decreases and Enbrel becomes a larger portion of our total sales. In addition, we would expect the Wyeth profit share will continue to increase due to higher Enbrel sales.

It's also worth noting that we had a onetime tax settlement in 2007 which we reported in the second quarter and that will not be part of our 2008 rate. So, offsetting these increases are obviously SG&A changes and SG&A and research and development. SG&A excluding the Wyeth profit share will be lower. And as Kevin said in his remarks earlier, R&D will be trending down as a percentage of sales as well.

Now, I would like to just spend a few moments on R&D. As you know, R&D represents the largest portion of our operating expenses and we have increased investment rapidly in this area over the last several years. Recall that we substantially increased our investment in R&D from 2005 to 2006 to capitalize on our late-stage product candidate opportunities and to grow our clinical and research capabilities. This investment decision reflected our confidence and our pipeline and the overall business environment.

Our plan resulted in 2006 R&D investment of $3.2 billion which represented 23% of sales and 39% year-over-year growth. Of course, a portion of that expense is represented in the nine mega trails that we started in 2006 along with a number of other clinical studies. And given that clinical studies are multiple year investments, they result in expense commitments into and through 2008. And while we remain enthusiastic about our pipeline and our R&D capabilities, we recognize that the business environment has changed. And so we're changing our plans. We have made and will continue to make adjustments to moderate our R&D expenses. Let me talk to you about some of these adjustments.

First, we gained efficiencies and planned staff reductions in a number of areas within R&D while reassessing our core competencies and outsourcing where appropriate. We will prioritize our development opportunities and seek partners or other approaches as appropriate.

One example of this is our recent partnering of denosumab in Japan with Daiichi Sankyo. We have already commenced the process of seeking a partner with motesanib diphosphate or AMG 706. And we're actively outlicensing some of our earlier-stage compounds including AMG 403 for pain and AMG 623 for lupus. And we're looking to divest of some of our smaller marketed products with an aim to reduce costs overall including the cost of R&D investment required to keep those products on the market.

In addition, we will optimize our clinical manufacturing network and we're assessing our facility requirements in R&D to reduce our capital expenditures and fixed costs. As Kevin noted, over time, we expect R&D to trend to 20% of sales. And we will give you a progress report on that when we gather in October and we would expect in early 2008 to have a general business update meeting with you in which we can share a full perspective on the pipeline and help provide you a better understanding of our cost structure in R&D and elsewhere.

Now, I will turn back to Kevin and then to question and answers.

Kevin Sharer - *Amgen - Chairman, CEO*

I would like to just recap a bit here before we start the Q&A. We have shared quite a lot of information with you and I know you'll have questions. But, let me just summarize what I think is significant.

The first thing is that we are a company and a management group that faces reality and deals with it. We have a new reality to face today compared to when we planned this year. We also know that things are fluid right now. And we will adapt to reality as it presents itself while trying to shape that reality.

We revised our EPS guidance for 2007. We're taking steps to revise our financial plans following the NCD decision. We think the NCD decision is wrong and it has many negative effects for patients as George described. We're going to continue to try to get the CMS to modify that decision but we have to plan as if it were not to be modified.

Our restructuring program is significant, wide-ranging, and responsive. It also is designed to help us continue to fulfill our mission of serving patients, both now and in the future. We will continue to invest heavily in the future of the Company. It's what we need to do. It's the right thing but we will seek new ways to do it. And our R&D spending as a percent of sales well compared to 2006 levels certainly go down and we will trend to 20% in that neighborhood over time.

We think these actions will position us for success in 2008 and form a platform from which we can grow. And we will in the winter January, early February 2008 be able to share with you in a much more complete and thorough way our view of 2008 and the future. And, with that, we would like to take your questions.

Arvind Sood - *Amgen - VP, IR*

May, would you review the procedure for asking questions please?

QUESTIONS AND ANSWERS

Operator

(Operator Instructions). Geoff Meacham.

Kevin Sharer - *Amgen - Chairman, CEO*

Geoff, are you there?

Arvind Sood - *Amgen - VP, IR*

Okay, let's move on to the next question.

Operator

Joel Sendek.

Joel Sendek - *Lazard Freres - Analyst*

It seems from a big picture perspective that since you're looking at 2008 as a base year from which you are growing that that seems to imply that the earnings in 2008 might be down versus 2007. Is that a possible or a right interpretation or am I looking at it wrong?

Kevin Sharer - *Amgen - Chairman, CEO*

I know, Joel that there are just many, many, many questions about 2008. And I understand that. And I would love to be able to tell you exactly what is happening in 2008 but we don't know right now. And so, while there will be lots of work trying to make up your own mind what 2008 looks like, all I can tell you right now is that we've got some uncertainties to go through here. We are mindful of the balance between earnings and investment for the future. We're signaling here some pretty aggressive cost moves. And we're going to try to deliver in the short and long-term.

But, it would just be premature for me to try to characterize any particular outcome in 2008 and I don't want you to take that response as a negative response. It's not. It's an honest response. We're going to try to the absolute extent possible to deliver both attractive earnings in 2008 and position the Company for the future. But it's just too early to zone in on exactly what that will be and how. We will be able to share a little bit more color in third quarter. That is October. And then in the normal course around the fourth-quarter report, we will get a lot clearer.

So, I respect the question and I understand the interest. I hope you all understand we just can't give the specificity that probably you all wish we could. So with that, I will take the next question.

Operator

Mark Schoenebaum.

Mark Schoenebaum - *Bear Stearns - Analyst*

It's Mark. First of all, thanks for doing the call. I know this is obviously a difficult time. This is very much appreciated from the investment community if I'm representative of it at all. So, thank you.

I think Roger is tucked away there in the room, so I thought maybe I would ask Roger a question. You know, the big increase in R&D in 2006, I think the investment community knows generally where that money went. Can you -- are you willing at this point maybe to provide any more granularity around specifically where that went?

And then the correlated question is, Roger, how are you thinking about R&D productivity at Amgen? How is that measured? How do you measure the productivity of a dollar spent on R&D right now?

Kevin Sharer - *Amgen - Chairman, CEO*

Let me take the productivity and then I will turn it over to Roger. Since I run the bank and Roger runs the lab, we both think about both of those questions.

I think that the question of R&D productivity in a biopharmaceutical company is an important question and one that has bedeviled us all for a long time. In the sort of way that we might have been taught in business school about project returns and discounted cash flows and what have you, those tend to be relatively unsatisfying tools to look at it. What we try to do is look at things over long periods of time.

In effect, we just started here in 2002. The current team showed up in 2001 and we basically were faced with starting an R&D organization again. And so, we've been added here, assuming we started in 2002 for about 5.5 years. So, I would say it's a bit early. But here in the next year or two, we're going to be able to make some judgments. I would also say that the revenues went from 3.2 to nearly 15 billion in that period of time. So, something good had to be happening on the R&D side.

We've got a pipeline that is dramatically more full than we had before. And we've got a molecule in denosumab that we hope is an absolute double blockbuster. But it takes time. If you look at how many molecules in our biopharmaceutical industry were approved by the FDA this year compared to the ones that either got approvable letters or safety problems or who knows what, we know the hit rate is pretty low.

That's not a completely satisfying answer, Mark. But I'm satisfied that the investment we've made in R&D, everything has not turned out perfectly. It never does. So far so good, but it's going to be a bit of time here before we can make a full and informed judgment. But we're trying to be as efficient as we can. And I will turn it over to Roger to get his view of those two questions.

It is an absolutely key question for investors and management and the toughest single thing to get your head around in this business. So, Roger, go ahead.

Roger Perlmutter - *Amgen - EVP, R&D*

The first thing to address is -- gee, what about the additional investment made in R&D and keep in mind that just as Kevin said, we advanced a lot of new molecules forward beginning after 2001. In 2000, there were actually no new product candidates that were brought forward from the laboratories. And there's been an increasing pace of product candidates coming out. And those things as they go forward into the clinic become more and more expensive.

What we realized is that we needed to actually build the infrastructure in preclinical and clinical to manage all of these new drug candidates that had come forward. And indeed, that's what we've done. So, for example, we had to add more than 1000 staff in 2006 largely in the development and regulatory affairs area in order to manage those products.

In addition, we had the nine mega trials which Bob Bradway mentioned which carry a very substantial cost associated with them. That cost is allocated disproportionately because when the flag drops on such studies, you incur a significant amount of the cost prior to the time that you begin the captivated costs. So that was really what was necessary to do in order to really serve the expanded pipeline.

I would just reiterate some of the things that Kevin said. Between 2001 and 2006, we've had six new products. We had additional new indications that are extremely important. All of those things were generated by R&D spend. The revenue went from 3.5 billion to nearly 15 billion across that period up until the present.

Clearly, George would say he has to have things to sell. Things like the Enbrel psoriasis program, the Neulasta 17% febrile neutropenia program in addition to new products like Sensipar -- a lot of stuff has come out. I do agree with Kevin also that the product lifecycle as you know is extremely long. From the time of discovery to the time of registration is certainly over a decade and typically now edging closer to 15 years.

In addition, we're asked by regulatory agencies around the world to do an awful lot more in terms of risk management and providing a substrate for the analysis before registration. So, all of those things have become more expensive.

When I look back at my now many years in the industry and think about what we were spending in R&D a decade ago -- for example at Merck compared to the present -- thinking of the distribution of funding and the amount of expense for any individual product has gone up so much. And that's why we have had to make these kinds of investments really playing catch-up to bring Amgen to the point where it could succeed as a biopharmaceutical company.

Kevin Sharer - *Amgen - Chairman, CEO*

Let me just one more point because it's such an important question, we have enormous respect for Genentech. And I think you do too and I think they had a great track record. So we often compare our investment levels and productivity against Genentech.

So, one of the things I looked at was the last year that data were available, 2006. And our R&D spend was about 3.2 billion. Theirs was about 1.8 billion. Our revenue was 14.3. Theirs was 9.3. And so, what I did is I scaled Genentech's spend up at our revenue level and that added 952 million to their 1.8.

And then, we have something that's not often recognized which is, I think, we are about the only company that has a fully agnostic technology platform. That is, we made a bet 10 or 12 years ago that having large molecule/small molecule antibody peptibody capability was very, very important to be able to interact with biology. And so, we're going to have a bit of an increased investment for small molecules that Genentech would not have. And we have to invest in Europe in a more worldwide development plan than Genentech.

So, when you do those scale-ups for small molecules and worldwide R&D and then you scale them up for their size compared to ours, we get a number that's very, very close to ours. In fact, it's a little bit bigger.

The other thing and the final point I would add is that a great product success they have had which we salute, Avastin went into the clinic in 1998 and I think it emerged on the market in six or seven years. And so, it takes a while to get this done. Don't take any of these as excuses or a lack of attention to making the most out of the dollars but kind of a more in-depth answer to this question and I hope a conclusion on your part that we care about this enormously.

Operator

Geoff Meacham.

Geoff Meacham - *JPMorgan - Analyst*

Just a question for you on the guidance. I want to know what the guidance considers with respect to Aranesp and CKD or any buybacks at least as the 2007 ETF guidance.

Bob Bradway - *Amgen - CFO*

With respect to buybacks, no change from what we said in the past. We will continue to be opportunistic with respect to buybacks. George, you want to comment on--?

George Morrow - *Amgen - EVP, Global Commercial Operations*

Yes, and with regard to Aranesp CKD, I think we're tracking right along. So I don't think any -- other than maybe a little bit of label impact last March, we have really been unscathed by a lot of this business.

Geoff Meacham - *JPMorgan - Analyst*

And just a quick follow-up if I can.

Kevin Sharer - *Amgen - Chairman, CEO*

Let's just stick to one question, okay? I want to give your colleagues a chance. I am sorry.

Operator

Michael Aberman.

Madi Muhenchu - *Credit Suisse - Analyst*

This is [Madi Muhenchu] on behalf of Michael. I just had a quick question. I know you talked that you couldn't give much clarity for the third quarter regarding the Roche trial and the Cardiorenal Panel's outcome. But presuming, if there is a potential for the outcome for both these scenarios to be negative, is it possible that we hear about more such cuts or more such restructuring in a negative outcome scenario for either of the two events?

Kevin Sharer - *Amgen - Chairman, CEO*

What I said and we certainly don't expect or hope that either of those events will be negative but being realists, we recognize there is some finite possibility. We are a reality-based organization here. And if circumstances change, we will change. Our objective at Amgen is to make sure we serve patients and we've got to serve shareholders too. So we will make the judgments we need to make to keep working both ways or both of those objectives. So, if we've got to do more, we will. And we can but we sure hope we don't have to.

Operator

Yaron Werber.

Arvind Sood - *Amgen - VP, IR*

Are you there?

Richard Yeh - *Citigroup - Analyst*

This is actually [Richard Yeh] for Yaron. I'm just wondering if you can talk about if you can break out where the areas of cuts are based on manufacturing, R&D or sales. I'm not sure if you can give us some granularity.

Kevin Sharer - *Amgen - Chairman, CEO*

Let me take that. We purposefully are not doing that today. But a couple of things. One, R&D and manufacturing operations if you will are our two largest cost centers. So it's reasonable to conclude that the representative amount of the cuts are coming from there.

And in terms of sales, we have a very efficient, very if you will thin distribution. And we think that that is sized in the right way now. And so, we are not making a move there. But, in time, we will have more detail as we implement it here. But basically, we are trying to do what we said in the press release and I will just leave it at that.

Operator

William Sargent.

William Sargent - *Banc of America Securities - Analyst*

I guess my question was around your understanding with CMS. You mentioned that there could be an increase in transfusions with the new NCD. Is the understanding you have that CMS would take an increase in the transfusions as being a negative trend that would perhaps make them reconsider this? Or would they be looking more for morbidity/mortality endpoints as a result of this and are you initiating any studies or chart reviews to capture this?

Kevin Sharer - *Amgen - Chairman, CEO*

We don't want to speak for CMS. I think you would have to ask them. I would just go back to my summary comments. This is not a decision based on any clinical data or practice we know of. The oncology community is deeply opposed to this. I cannot imagine that the government would find the kind of transfusion increases and severe dislocation that going to hospital for

these very sick and often elderly patients would entail as a good public policy. I would be shocked if anybody found that a good idea. So, we will keep working it and hope that we can get a different outcome.

William Sargent - *Banc of America Securities - Analyst*

So just to clarify that just a bit further, you're not initiating any further studies to be looking at the outcomes from this decision?

Kevin Sharer - *Amgen - Chairman, CEO*

We believe the study that George just referenced is quite informative on the transfusion question and that is really all I would like to say right now. We will just keep working.

Operator

Jennifer Chao.

Jennifer Chao - *Deutsche Bank - Analyst*

Thanks for hosting this call and the level of transparency has been very helpful. I want to ask you guys about the constituency of the CMS opposition. If you could just talk about the process and whether or not this involves regulatory and reimbursement legal representation and how we should look towards key events for tracking progress on the opposition?

Kevin Sharer - *Amgen - Chairman, CEO*

Well, I think what's happened is, most of the big medical societies, a lot of the patient groups and a lot of the other organizations have basically written letters, called. CMS has hosted a couple of teleconferences. And so, they are really pushing back very hard on two fronts. One is, they can't believe that CMS did this because they really think it's going to be bad -- very bad for patient care. But also, there isn't much clarity about the way this is going to be implemented. In fact, a lot of the Medicare contractors don't know how to implement it yet. So they are trying to unravel all of that.

I think there are -- people have been talking about regulatory, administrative and legal ways of getting the CMS to change the NCD. I'm not sure how all that all is going to play out at this point. But I can tell you, people are up in arms and a lot of talks coming into it. But I think it remains to be seen how it plays out.

George Morrow - *Amgen - EVP, Global Commercial Operations*

Yes. From an investor point of view -- and I know this is frustrating -- it will look relatively opaque until something happens. If it does happen, we will try to share with you at appropriate times how the fight is going. But there probably won't be a bunch of milestones short of they actually do something that you can make a judgment about. But you can be sure that we're going to bring the full weight of evidence and other interested parties' point of view to bear at all of the appropriate places in the executive and legislative branches. This is something of enormous interest to patients and we exist to serve patients. And this is bad for patients.

Jennifer Chao - *Deutsche Bank - Analyst*

Does FDA change its label?

Kevin Sharer - *Amgen - Chairman, CEO*

We will just have to wait and see. I'm not going to predict what the FDA is going to do. That's kind of all I can say about this thing right now. So thanks for the question. Why don't we go to the next one?

Operator

Geoffrey Porges.

Geoffrey Porges - *Sanford C. Bernstein & Company - Analyst*

Just sort of question for Bob related to the cash flow question and the modeling of this. Is it possible that you'll be able to maintain your current level of share buyback in the 4 to $5 billion range going forward with the cash flow savings? And then, just related to that, can you give us a sense of what you think this is going to do to your tax rate going forward? You previously said that you thought it could get slightly better.

Bob Bradway - *Amgen - CFO*

First, with respect to our buybacks, as you know, we feel we have a very strong balance sheet. We feel the actions we're taking now strengthen our cash flows and balance sheet as well. And we plan to be opportunistic with respect to buybacks. We have authorizations as you know to continue the buyback programs. But we're not as part of this going to make any forecasts about how much stock we will be buying back. So, as we have done in the past, we will be opportunistic and continue to assess whether it makes sense in periods when we're able to buy back stock and not blacked out from the market.

With respect to the tax rate, as I said earlier on the call, this is not material to the tax rate. I think the more important consideration for you to reflect on is that if you're looking at the 2007 tax rate, remember we have the large settlement which we reported in the second quarter. You may recall that in the first quarter, I noted that that was a pretty clean quarter from an operational standpoint and there were no tax settlements there. So, that may give you a better feel for what the underlying tax rate of the business is. And again, we're not expecting any real material shifts in that as a result of the actions we're taking.

Kevin Sharer - *Amgen - Chairman, CEO*

And I would like to just reinforce what Bob said that this set of actions gives us a stronger cash flow potential. Our strategy has been and continues to be to an intelligent ways return value to shareholders. We have done that historically. We certainly intend to do it going forward. But we won't make a prediction but I can sure tell you what the strategic intent is and we've got the capability. So, thanks. Next question please.

Operator

May-Kin Ho.

May-Kin Ho - *Goldman Sachs - Analyst*

George, can you comment what we should expect on the commercial side of the business? I know that with ASP, it took a long time for the adoption and actually most of the commercial payers, they are still not using ASP. So, for something like this where you actually affect patient management, should we really expect minimal impact on the commercial side?

George Morrow - *Amgen - EVP, Global Commercial Operations*

Yes, it is a tough one to call. I'm sure everybody saw what Blue Shield did in California recently. And that is -- these are the people that initially adopted the NCD at the proposal then backed off because of all the pressure they got from the community. And now they put their next policy out and basically says, you can go to 12.

So, I really believe that most of the commercial payers will use the expert guidelines -- the ASCO/ASH, NCCN guidelines, not the NCD to structure their reimbursement policies. But you never know. But I think they will take a much more considered approach. That's been the experience.

Operator

[Majeed Ganooda].

Majeed Ganooda - - *Analyst*

You mentioned in your comments a limited effect on international Aranesp sales to date. Can you just elaborate a little on that and how to reconcile that going forward with your previous comments on a rationalization of the European ESA labels in the fourth quarter?

George Morrow - *Amgen - EVP, Global Commercial Operations*

So there's been a minor impact we believe in Europe in the oncology area for ESAs, nothing really in nephrology. And with regard to -- and how that plays out going forward, we're going to see a label -- maybe Roger, you can comment on the EMEA labeling.

Roger Perlmutter - *Amgen - EVP, R&D*

Yes, I mean the labeling process is going forward. There were scientific advisory groups, both for oncology and nephrology which we mentioned on the last earnings call. And, that has -- will ultimately play out into revised labels I think for everyone. We're not expecting to see anything terribly dramatic on that. But it will take some time to negotiate.

Majeed Ganooda - - *Analyst*

Do you think it will play out in a similar fashion to what we have seen in the US in terms of just utilization cuts?

Roger Perlmutter - *Amgen - EVP, R&D*

I can't really speculate on what the ultimate process will look like but everything we've seen to this point is very reassuring.

Kevin Sharer - *Amgen - Chairman, CEO*

We've got time for two more questions.

Operator

Eric Schmidt.

Eric Schmidt - *Cowen and Company - Analyst*

Thanks for taking my question. It's on the 2007 guidance. Kevin, you mentioned that the guidance includes some unquantifiable impact from the NCD. I guess most of us of course are wondering what would happen if CMS reverses the decision what --

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Kevin Sharer - *Amgen - Chairman, CEO*

We'd be happy!

Eric Schmidt - *Cowen and Company - Analyst*

But, that's not really my question. I guess it is more about the other two variables here that you put forth. What the guidance assumes for example for an at-risk peg-EPO launch if any and what the guidance assumes out of the September 11 nephrology panel.

Kevin Sharer - *Amgen - Chairman, CEO*

The guidance does not assume that we lose the peg-EPO trail and have a launch and the guidance does not assume some new negative on the cardiorenal. And like I said, there's uncertainties going forward and we will deal with them when we get there. We've obviously got some range in here. But specifically, I think I answered the question. So, I want to be clear there. One more question please.

Operator

Steve Harr.

Steve Harr - *Morgan Stanley - Analyst*

I wanted to kind of follow up a little bit on the use of cash. Because if I look at this over the last couple of years, you spent more than your free cash flow on buying back stock concentrating risk around a depreciated asset. You've got two-thirds of EPS growth coming basically from the share reduction. And now, when it looks like the business needs to be diversified, you're cutting R&D.

So can you help us understand going forward how you are going to use your cash? You are going to continue to buy back stock and concentrate the business around EPO and Aranesp or you plan on becoming more active in the business development world since you're not invested as much in the internal R&D?

Kevin Sharer - *Amgen - Chairman, CEO*

First of all, I'm not sure we said we're going to absolutely cut R&D expenses. We've got to think through that. I said that we would have as a lower percent of sales. And I guess you can't theoretically discount the fact that who knows what sales are going to be but that's not our intent. We also said in R&D that we're going to be much more active in the partnering area and make some other decisions.

In terms of the core question, Steve, that you asked and it's kind of the fundamental strategic question I think for the Company. That is, how do you diversify the Company intelligently away from a relatively few products concentrated in one big market with effectively one payer? And that's been the strategic question for Amgen for 15 years.

We, in the Immunex case took a step that I think addressed that. But the other products grew so fast that our success kind of keeps us there. Our strategic intent is to place the Company in a better strategic position and we can't discount the possibility of acquisition. In fact, we have had a pretty active acquisition program. But I don't have any thought here of some giant thing to in one fell swoop change the concentration of revenue. I can't figure out a way to do that to make sense for shareholders.

So, don't take our use of cash here as a signal that we're unconcerned about the diversification strategic question. I think in terms of balance sheet capability, our own cash flow generation, we've got enormous financial firepower here to do the right strategic stuff. And we will keep trying to do that. But, you put your finger on the sort of question that at the high strategic level we wrestle with around here and have for a long time.

But, anyway that is the best I can say today. And again, we appreciate all of your questions very much. We're going to be out and talking to people and will be available. And we look forward to talking to you again in October. We will give you a progress report on where we are and share with you our reality at the moment. Thanks a lot.

Arvind Sood - *Amgen - VP, IR*

I'm sure there are a number of others that we didn't get to in terms of their questions. The Investor Relations team will be available for the next few hours. So please feel free to call us. Thanks again for your participation.

Operator

This concludes today's conference. You may now disconnect.
