his is SCIENCE IN THE NEWS, in VOA Special English.In nineteen six, a German doctor, Alois Alzheimer, told about a dementia patient whose brain was studied after death.The method combines an examination by positron emission tomography with a drug that lights up beta-amyloid.In January, an expert advisory panel of the FDA debated whether florbetapir was ready for marketing.The most widely held belief about the cause of Alzheimer's is that a protein, beta- amyloid, builds up in patients' brains.The researchers say beta-amyloid destroys communication links in the brain.The PET device makes scans or images that doctors can read Studies have shown that the drug florbetapir can light up beta-amyloid and show it on the images.One condition is for the manufacturer to show evidence that florbetapir correctly identifies plaques.The advisory panel said the doctors reading the test need additional education to correctly identify the plaques.If it is approved, florbetapir would be the first agent permitted to measure plaque deposits in living patients.Other kinds of dementia can be corrected by changing levels of hormones or vitamins in the body.Some scientists question whether beta-amyloid causes Alzheimer's disease.They think that the protein build-up may result from it. But most researchers say thick tangles or plaques of the protein are responsible for the condition.Plaques are unusual clusters, or groups, of proteins.Alzheimer's affects memory and personality -- those qualities that make a person an individual.Alzheimer's affects people of all races equally.It treats patients with moderate to severe Alzheimer's.The Alzheimer's Association says FDA-approved drugs are effective for half the people who take them.Scientists have been attempting for years to learn who may get Alzheimer's disease.Among older people, Alzheimer's is the most common form of dementia, the loss of abilities needed for normal life.Doctors say methods to test the living have presented problems, like high costs for widespread use.Florbetapir is a radioactive coloring agent.The Food and Drug Administration will decide next month whether to accept the panel's suggestions.The FDA normally follows the advice of its expert advisers, but not always.In the United States alone, more than five million people suffer from this presently incurable brain disorder.Dementia is the loss of thinking ability that is severe enough to interfere with daily activities.Some kinds of dementia can be cured or corrected.Alzheimer's generally develops differently in each person.Also, victims of the disease have increasing difficulty learning and storing new information.The FDA has approved two kinds of drugs for Alzheimer's.Cholinesterase inhibitors may work by protecting a chemical messenger needed for brain activities.The British writer Iris Murdoch died of Alzheimer's disease.There is no cure for Alzheimer's, which steals people's ability to care for themselves.Large amounts of this protein may destroy a person's ability to think.A correct diagnosis, or identification, is important.The best way to diagnose the disease has been a medical examination of the brain after a person dies.Scientists have been working to produce a dependable test for the disease in the living.The United States' Food and Drug Administration is considering one such method.It connects with plaques in the brain.They also set conditions for accepting florbetapir.The other condition is that the manufacturer prepare a training program for experts in nuclear medicine.Still, the presence of plaques does not prove that a patient has Alzheimer's disease.Doctors say some people with amyloid plaques in their brains do not have the condition.An estimated thirty million people around the world have Alzheimer's disease.Victims of Alzheimer's do die from its effects or conditions linked to it. But death may not come for many years.Instead, dementia is a group of signs of some conditions and

diseases.This is especially true if they result from drugs, infection, sight or hearing problems, head injury, and heart or lung problems.Another sign of the disease is difficulty solving simple problems.Alzheimer's patients might not know what to do if food on a stove is burning.Quiet people may become noisy and aggressive.Alzheimer's disease normally affects people more than sixty-five years old.Alzheimer's is identified in only about two percent of people who are sixty-five.This is partly because women generally live longer than men.Most are called cholinesterase inhibitors.Doctors order them for mild to moderate cases of the disease.It is represented by the drug memantine.This medicine seems to work by governing the activity of a chemical involved in information processing, storage and memory.Her brain had sticky structures and nerve cells that appeared to be mixed together.Now, more than one hundred years later, scientists are still trying to find the causes and treatment of Alzheimer's disease.I'm Faith Lapidus.And I'm Bob Doughty.Today we tell about Alzheimer's disease.More than a century after its discovery, Alzheimer's disease is still destroying people's brains.If the condition could be identified before its worst signs appear, people might get at least temporary medical help.Other mental conditions may seem like Alzheimer's.Those conditions need medical treatment that is different from treatment for Alzheimer's.This makes it possible for doctors to see the plaques.The group did not suggest that the FDA approve the drug at this time.Still, the experts said they made the judgment based on available information.Patients forget the names of their husbands, wives or children.However, brain cells of Alzheimer's victims die.They cannot be replaced.Victims can become angry and violent as the ability to think and remember decreases.They sometimes shout and move with no purpose or goal.Media reports tell about older adults found walking in places far from their homes.These people often are suffering from Alzheimer's disease.Yet another sign is struggling to find the right words to express thoughts or understand what is being discussed.Finally, people with Alzheimer's seem to change.But the risk increases to about twenty percent by age eighty.Yet women are more likely to develop the disease than men.Patients cannot fully recover from Alzheimer's.That is especially true if the disease is found early.A doctor must order these medicines for patients.But research may offer hope for the future.But treatment can slow its progress.Public and medical demand for a better way has been strong.And they asked for more information.At first, people with the condition forget simple things, like where they left the keys to their car.But as time passes, they forget more and more.They may forget what a key is used for.Then they forget who they are.Finally, they remember almost nothing.It is as if their brains die before the other parts of the body.It is not a disease itself.Or they may become very quiet.They do not know where they are or where they came from.Yet some early signs of the disease are common.The victims may not recognize changes in themselves.They may struggle to hide them.Probably the most common early sign is short-term memory loss.The victim cannot remember something that happened yesterday, for example.Slowly, thinking becomes much more difficult.The victims cannot understand a joke, or cannot cook a meal, or perform simple work.Also, people have trouble following directions or finding their way to places they have known all their lives.They may easily become angry and lose their ability to trust others.But rare cases have been discovered in people younger than fifty.By eighty-five or ninety, half of all people are found to have some signs of the disease.But many can be helped by medicine.They are meant to treat memory, thinking, language, judgment and other brain activity.The second kind of drug

has a long name.For those fifty percent, the drugs are effective for six to twelve months.She said it was a dark and terrible place.