Thank you Mr.Chairman, and Ladies and gentleman, 
Good afternoon. My name is Hiroaki Aoki. 
I’m a urologist, at Juntendo university, Tokyo, Japan. 
I’d like to thank President Professor Kanessvaran for giving me the privilege to attend this conference. 
Today I’d like to present the current situation of prostate cancer in Japan.
There is no Conflict of Interest in this presentation.
Today, I’ve divided my presentation into 3 parts.
1st. I’ll talk about Epidemiology of prostate cancer and the public Insurance system in Japan.
Then I’ll move on to treatment of localized prostate cancer.
Finally I’ll wrap things up with a look at our cases.
This is the Main hospital of Juntendo university.
It was established in 1838, This year is the 175th year anniversary. Juntendo is one of the most famous and biggest hospital group in japan. There are 6 hospitals and 4000 beds.
Cherry trees in full bloom can be seen around the hospital. If you have the chance to visit Juntendo, I highly recommend coming in spring.
Ok, Let’s talk 1st topic.

Agenda

- Epidemiology and Insurance system in Japan
- Treatment of localized prostate cancer in Japan
- Management of geriatric prostate cancer patients in Juntendo
This graph shows the population component in Japan. Senior population are raising rapidly. In 2060, 35% of total man are over 65 years old.
As the population age increases, the morbidity of prostate cancer also increases. Prostate cancer is the most common cancer in Japan in 2025.
And Prostate cancer mortality also increases.
But, Japan and asian countries are the smallest incidence rate.
Why is the low incidence rate of prostate cancer in Japan? I think some nutrition causes that.
Key factor is soy. Soy consumption in Japan is the highest in the world. Washoku is the Japanese traditional style cuisine. We use soy in many washoku.
This data shows the decrease the risk of localized prostate cancer in the high plasma level of isoflavone. Genistein, Daidzein, Gycitein, Equol are the kinds of isoflavone. In localized cases, genistein and Equal were associated with a dose-dependent decrease in risk of localized prostate cancer. Recently, one study shows no different in prostate cancer prevention with soy supplement.
But, type of isoflavone, and intake period causes the incidence of prostate cancer.
another factor is curcumin. It’s in a turmeric. Isoflavone causes curcumin more effective and work as an antioxidant. This data from teikyo university shows the effectiveness of decline PSA level.
By the way, PSA screening is still controversial.
Recently, PSA screening are proliferated in Japan. In 2006, 70% of Japanese communities are carrying out PSA screening.
As the PSA screening rate raising, metastatic cancer incidence rate rate is decreasing.
Insurance System in Japan

National Health Insurance covers most treatments.
Patients pay below 30%.

Before next topic, I should talk about the national health insurance system in Japan.
In Japan, most therapies and drugs are covered by the public insurance system. I list up the available treatment of prostate cancer in Japan. This year, we are available to use Enzaltamide, Abiraterone Accerate, Cabazitaxel.
HIFU, Proton beam, Heavy ion radiation are not covered. But the cost of most treatments is low, however this makes for a difficult financial situation for the government. Recently There are $4 trillion DEBT in Japan.
For example of the cost, Robotic prostatectomy costs $10,000, but patient pay under $1000. Because the insurance system sets an upper limit.
This Topic’s summary, Prostate cancer incidence are rasing. but proliferation of PSA screening, metastatic prostate cancer is decreasing. and originally japan has low incidence of prostate cancer because of some food like soy or turmeric. and medication in japan has low costs.
so, Then I’ll move on to the next talk about localized prostate cancer.
J-Cap (the Japan Study Group of Prostate Cancer)

- J-CaP surveillance is a nationwide longitudinal observational study of patients newly starting hormone therapy for prostate cancer.

- The 19,409 cases initially receiving primary Androgen Deprivation Therapy (ADT) were included in this study.

J-Cap is nationwide observational study, and 19,409 cases were taken primary Androgen deprivation.
This bar graph shows the primary therapy in localized prostate cancer in 2003. A lot of geriatric patients take Androgen deprivation therapy.
In 2010, there is a few changes, radiation therapy increased. And active surveillance increased in younger patients. And surgery was a few increased in over 70 years old.
In the androgen deprivation therapy, most of them take Combined androgen blockade.
This date shows clinical outcome after androgen deprivation. Japanese was better result than caucasian. Combined androgen blockade is possibility of reason why Japanese survival rate is higher than Caucasian.
So, is the Surgical Treatment decreasing in the future? I think it isn’t Surgical treatment might increase.
The cause is that Robotic surgery was covered by National Health Insurance starting since 2013.
after that, robotic surgery is increased rapidly.
At the present time, there are 175 da vincies are working in Japan.
The yellow point shows Juntendo. There are 20 machines around Juntendo within 15Km.
Summary 2

I
Geriatric patients take CAB in Japan

II
J-Cap database shows ADT had better result in Japan

III
Robotic surgery is increasing recently

In Japan, a lot of patients take CAB and the result is higher survival rate than caucasians. Recently Radiation therapy is increasing, but in the future, the Statistical data shows increasing robotic surgery.
Finally I’ll wrap things up with a look at our data and some clinical study
Adverse Events of ADT

| Osteoporosis | Increased cholesterol |
| Loss of muscle mass | Memory loss |
| Weight gain | Depression |
| Cardiovascular disease | Reduce of libido |
| Diabetes | Fatigue |
| | Hot flashes |

There are many adverse events on androgen deprivation. We need supports to prevent these events.
This bar graph shows the rate of osteoporosis after Androgen deprivation.
It is Very high, There are 80% after 10 years androgen deprivation.
Frailty and Sarcopenia

- Muscle volume reduction
- Physical strength Declines

Frailty and sarcopenia is very important in geriatric patients. It is a serious problem in Japan. Androgen Deprivation causes muscle mass reducing.
We investigate how to prevent muscle and bone mineral decrease and enhance the physical strength, maintain Activity of Daily Life. We build up the program for Androgen deprivation.
This is the factor of this program. Above factor is for bone mineral, and below factor is for muscle. Just preliminary practice, and we check the balance of these factors. Quantity of protein intake, or kind antioxidant or when is starting on Androgen deprivation. Before or after.
However, Adndrogen deprivation causes some Adverse event, Robotic surgery is low incidence of complication and has cost effectiveness.
and in our institution Robotic surgery started from July 2013. In just a year 120 cases were taken. 37 cases were over 70 years old. This chart shows our characteristic data who took Robotic Prostatectomy in over 70 years old. Most patients is healthy or vulnerable men. There were no complication and early recovery.
I show you the operation video. This video shows a very dry field, smooth handling of the instruments, easier suturing. As we are available to see the detail, we preserve the pelvic floor muscle and neurovascular bands, and it’s causes the good result for continence and potency.
Robotic surgery make minimum invasive surgery. Very little blood loss and shorter surgical time. We think it is suited to geriatric patients.
We survey about Surgery and Muscle reduction. In the survey for radical cystectomy, it shows long surgical time cause decreasing muscle mass around 9% before surgery. This result apply to prostate cancer or other surgery.
Now we build up the surgery program for geriatric patients. We evaluate these assessments. In the Questionnaire, there are Depression scale, Mental scale, IADL and other comorbidity assessments. In Nutrition analysis, we evaluate Mini nutrition assessment and serum albumin, total cholesterol, fatty acid. And in Physical assessment, we evaluate grip strength, and walking speed.
In the case who find the risk of malnutrition or frailty, we set up support program before surgery. Nutritionist and physical therapist supports us, and provide some nutrition supplement and appropriate exercise. After surgery they follow patients continuously.
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<th>ADT causes some adverse event</th>
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<td>II</td>
<td>Prevention Program are needed</td>
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<td>III</td>
<td>Minimum invasive surgery is available to geriatric patients.</td>
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Summary 3
Androgen deprivation affect some adverse event for patients. So, we need prevention program and minimum invasive surgery is available to geriatric patients.
Today I talk about situation in Japan.
Prostate cancer incidence increase in Japan.
J-Cap database shows Androgen deprivation had better result in Japan.
But Androgen deprivation causes some adverse events.
Recently, Robotic surgery rapidly proliferated. So, we believe minimum invasive surgery is the
better and safe option for geriatric patients. These bring me to the end of my presentation.
Thank you.

Thank you for your time and kind attention.