

# East Lancashire Prostate Cancer Support Group Newsletter



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## Cancer CURE: Salmonella bacteria REDUCES the size of deadly prostate tumours

**CANCER** could be stopped in its tracks by a strain of salmonella - a bacteria which can cause food poisoning. Experts said the bacteria could shrink cancerous tumours without targeting healthy cells.

By Olivia Lerche

PUBLISHED: 09:09, Thu, Dec 8, 2016 | UPDATED: 10:16, Thu, Dec 8, 2016

Scientists at the University of Missouri tested a non-toxic strain of the bacteria on mice.

They found the germ - named CRC2631 - targeted cancer cells in the body, without harming healthy ones, and reduced the size of the tumour.

More than 500,000 people are said to contract food poisoning in the UK each year, with salmonella the leading cause of illness - but the scientific breakthrough

used harmless strains to ensure no damage to normal cells.

Experts injected the salmonella strain into the circulatory system of rodents with prostate cancer.

Robert Kazmierczak, senior investigator at the Cancer Research Centre and lead author on the study, said: "Bacteriotherapy is the use of live bacteria as therapy to treat a medical condition, like cancer.

"Salmonella strains have a natural preference for infiltrating and replicating with the cancer cells of a tumour, making the bacteria an ideal candidate for bacteriotherapy.

"We found that the mice tolerated the treatment well and when examined, the prostate tumours decreased by about 20 per cent compared to the control group."

The bacteria - derived from a sample stored at room temperature in a laboratory for more than 50 years - is able to penetrate through cell barriers. Dr Kazmierczak added: "One of the most remarkable aspects of Salmonella is its ability to target, spread and persist inside the tumour. We are taking advantage of this ability by using Salmonella to carry or generate effective chemotherapeutic



**Merry  
Christmas**

drugs, concentrating them at and throughout the tumour.

“The goal of this treatment is to develop a bacteria vector that can destroy the tumour from the inside out and reduce the amount of side effects endured by patients with cancer.”

The findings have been welcomed by UK food scientist Richard Conroy.

Mr Conroy, founder of SickHoliday.com, said: “Salmonella affects millions of people worldwide every year, causing diarrhoea, stomach cramps and vomiting.

“Salmonella bacteria lives in the guts of many animals and is usually spread by eating contaminated food including meat and poultry.

“It understandably has a bad reputation because anyone who has suffered from the illness knows how nasty it can be.

“But although it is usually associated with food poisoning, there has been increased attention in the last decade or so surrounding the use of a genetically-modified version of this bacteria for cancer therapy.

“It is very interesting to see how the bacteria can be used for good - to target and control the spread of a disease - while leaving healthy cells alone.

“Needless to say, research into this has a long way to go. But it is promising to see how this bacteria can be used to assist medicine.”

In July scientists at Swansea University conducted their own study, branding the use of harmless salmonella a ‘game changer’ in treatment for prostate cancer.

Professor Paul Dyson, of Swansea University Medical School said: “We found that the bacteria will multiply and continuously produce the therapeutic molecules which keep targeting cancer cells.

“This is very different from existing approaches to cancer, where repeated rounds of treatment are necessary.

“Using a harmless strain of salmonella to deliver the treatment would also make it non-toxic, as it would leave health tissue unaffected.

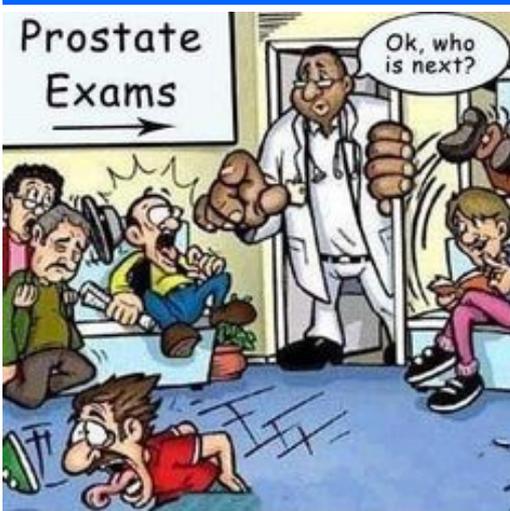
“Further research is necessary, however, to see for example how the technology works with other cancers, and metastatic cells.”

Abraham Eisenstark, scientific director at the University of Missouri and senior author on the study, said: “The uniqueness of CRC2631 differentiates our Salmonella strains from other universities trying to achieve the same goal - it is one of a kind.

“The strain of Salmonella we are using is essential to the success of our study.”



## “A Little Bit of Fun” For Christmas



The best way  
TO SPREAD  
CHRISTMAS  
CHEER  
is singing loud  
for all to hear



“Frankly, I don’t enjoy prostate exams any more than you do!”

# *Prostate cancer CURED with high dose testosterone jabs in incredible medical breakthrough*

**PROSTATE cancer could be treated by shocking tumours with testosterone after a man with the advanced stage of the disease was cured.**

By Olivia Lerche

PUBLISHED: 09:52, Thu, Dec 1, 2016 | UPDATED: 13:36, Thu, Dec 1, 2016

Scientists have been surprised by the results of the trial - as the male hormone is generally assumed to fuel cancer.

Tumours were seen to shrink and in several patients also suffering with the [cancer](#), the progress of the tumours slowed down and even stopped.

Levels of Prostate Specific Antigen (PSA), a marker used to monitor prostate cancer, fell in the majority of the 47 participants.

One individual whose PSA levels dropped to zero after three months and shows no remaining trace of the disease after 22 cycles of treatment appears to be cured, said the researchers.

Professor Sam Denmeade, from Johns Hopkins University School of Medicine in Baltimore, US, who led the new study, described the results as 'unexpected and exciting'.

"We are still in the early stages of figuring out how this works and how to incorporate it into the treatment paradigm for prostate cancer," he said.

"Thus far we have observed dramatic PSA response in a subset of men; PSA levels declined in about 40 per cent of men and in about 30 per cent of men levels fell by more than 50 per cent.

"Some men also have objective responses with a decrease in the size of measurable disease, mostly in lymph nodes. Many of the men have stable disease that has not progressed for more than 12 months.

"I think we may have cured one man whose PSA dropped to zero after three months and has remained so now for 22 cycles. His disease has all disappeared."

All the men taking part in the pilot trial had completed at least three cycles of BAT therapy, which involves flooding and starving the body of the male hormone testosterone.

Experts said that for years men with advanced prostate cancer have been treated by cutting off or blocking the supply of testosterone.

However, the trials have shown shocking the tumours with high levels of the hormone can kill the cancer.

The men received high dose injections of testosterone once every 28 days. At the same time, they were given a drug that stopped testosterone being produced naturally by the testicles.

Professor Denmeade added: "Our goal is to shock the cancer cells by exposing them rapidly to very high followed by very low levels of testosterone in the blood.

Six of the men tested positive for a protein called AR-V7 that may be associated with resistance to one of the cancer treatments.

After BAT treatment, no sign of the protein was seen in the blood of all six. Two of the men had declines in PSA level of 50 per cent or more.

Experts said the therapy appears to be well-tolerated by the patients, one man experiencing an increase in pain and another having a problem with urine retention.

Professor Denmeade said it was still not clear how the treatment worked, but it appeared to involve cell signalling and part of the process of cell division.

However, the expert warned that the therapy was still highly experimental and only suitable for men not suffering painful symptoms.

"Testosterone treatment can definitely worsen pain in men with prostate cancer who have pain from their disease," he said.

Each year around 47,000 men are diagnosed with prostate cancer in the UK and 11,000 die from the disease.

Dr Matt Hobbs, deputy director of research at the charity Prostate Cancer UK, said: "Drugs that reduce the levels of testosterone (androgen deprivation therapy) are an effective treatment for thousands of men with advanced prostate cancer.

"However, at some point the cancer evolves and those drugs stop working.

"This research is intriguing because it offers a hint that - somewhat unexpectedly - for some men whose cancers have reached that 'hormone-resistant' stage it may be possible to kill or stop growth of the cancer cells by actually overloading them with testosterone.

"Many exciting new lines of attack against prostate cancer are emerging of which this is one."

However, Dr Hobbs warned the findings were from the early stages of research, adding further studies are needed to understand the 'intriguing developments'.

[Prostate cancer](#): Urologist reveals if YOU can detect or prevent the lethal disease



## Christmas Lesson

© JULESIES

Christmas is a special time  
To give, to serve, to love  
It isn't just about yourself,  
But others that you think of

The presents, the trees, the glowing lights  
Are fun but have no part  
In what the real meaning of Christmas is...  
That is in your heart

Even if other people don't,  
You should try to do  
The things that you would want  
Them to do to you!

The holidays are a busy time  
But they are sometimes good  
Because they keep you thinking  
About others like you should

So this year, try to not think about yourself  
But think of the things you can do  
To help others have a wonderful Christmas  
And you will find that you will be happy too



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From Left to Right Hazel Goulding (Treasurer) Leon D Wright (IT Admin) Stuart Marshall (Secretary) Steve Laird (Vice Chairman) Dave Riley (Chairman)

We are a group of local people who know about prostate cancer. We are a friendly organisation dedicated to offering support to men who have had or who are experiencing the effects of this potentially life threatening disease.

The East Lanc's Prostate Cancer Support Group offers a place for free exchange of information and help for local men and their supporters (family and friends) who may be affected by this increasingly common form of male cancer.

At each meeting we strive to be a happy, supportive and upbeat group of people; encouraging open discussion on what can be a very difficult and perhaps for some an embarrassing subject. We have lively, informative, interactive, sharing and above all supportive meetings.

*Next meeting 5th January  
2017*

*A very Merry Christmas &  
Happy New Year to All.*

*The Crew @ ELPCSG*

Sponsors



# *Abiraterone acetate (Zytiga®)*

Abiraterone acetate (often shortened to abiraterone) is a [hormonal therapy drug](#) used to treat advanced prostate cancer. It is also known as Zytiga®.

On this page

[How abiraterone works](#)

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[Possible side effects of abiraterone with long term use](#)

[Other information about abiraterone](#)

[References and thanks](#)

It's best to read this information with our general information on prostate cancer and advanced prostate cancer.

You will see a doctor or nurse regularly while you have this treatment, so they can monitor its effects.

## **How abiraterone works**

Hormones are substances produced naturally in the body. They act as chemical messengers and help control the activity of cells and organs. Hormonal therapies interfere with the way hormones are made or how they work in the body.

Most prostate cancers need the hormone testosterone to grow. Almost all testosterone in men is made by the testicles. A very small amount is made by the adrenal glands, which sit above the kidneys.

Abiraterone reduces the amount of testosterone made by your body. This reduces testosterone levels and may shrink the prostate cancer or stop it growing.

## **When abiraterone is given**

Abiraterone is used to treat prostate cancer in men whose cancer has spread to other parts of the body (advanced cancer). It can be used alone or alongside other types of treatment. If you're already taking a hormonal therapy drug such as [goserelin](#) (Zoladex®) or [leuprorelin](#) (Prostap®), your doctor may ask you to continue taking it while taking abiraterone.

Your doctor or nurse will explain how long you should take abiraterone for.

## **Taking your abiraterone tablet**

You take abiraterone as tablets once a day. You take it at the same time each day. Always take your tablets exactly as your nurse or pharmacist explained. This is important to make sure they work as well as possible for you.

You take abiraterone on an empty stomach. Take it at least two hours after eating, and don't eat for at least one hour after taking the tablets. Many people find it's best to take abiraterone an hour before breakfast.

Swallow the tablets whole with a glass of water and don't crush or chew them.

You will also be given [steroid](#) tablets called prednisolone to take every day. These help reduce some of the side effects of abiraterone.

It's important that you do not stop taking any of your tablets unless advised by your doctor. Here are some important things to remember:

- Don't take a double dose if you forget to take your tablet. Just take your usual dose the next day.
- Keep tablets in the original package and at room temperature, away from heat and direct sunlight.
- Keep them safe and out of the reach of children.
- Get a new prescription before you run out of tablets and make sure you have plenty for holidays.

Return any remaining tablets to the pharmacist if your treatment is stopped.

## **Possible side effects of abiraterone**

We explain the most common side effects of abiraterone here. But we don't include all the rare ones that are unlikely to affect you. You may get some of the side effects we mention, but you are very unlikely to get all of them. If you are taking other drugs as well, you may have some side effects that we don't list here.

Always tell your doctor or nurse about the side effects you have. They can prescribe drugs to help control them and give you advice about managing them. Don't stop taking abiraterone without talking to your doctor first.

### **Tiredness**

You may [feel tired](#) and lack energy while taking abiraterone. Try to pace yourself if you feel tired. Aim for a balance between resting and being physically active. There is evidence that regular exercise can reduce tiredness in men taking hormonal therapy. Ask your doctor or nurse what is safe for you to do.

If tiredness makes you feel sleepy, don't drive or operate machinery.

### **Anaemia (low number of red blood cells)**

Abiraterone can reduce the number of red blood cells in your blood. These cells carry oxygen around the body. If the number of red blood cells is low, you may be tired and breathless. Tell your doctor or nurse if you feel like this.

### **High blood pressure**

Abiraterone may cause an increase in blood pressure. You will have regular blood pressure checks when taking this drug.

### **Build-up of fluid**

You may put on weight or your ankles and legs may swell because of fluid building up. Tell your doctor or nurse if you notice this. If your ankles and legs swell, it can help to put your legs up on a foot stool or cushion. The steroid tablets your doctor prescribes will help to prevent this.

### **Sexual effects**

Most men lose their sex drive and have erection difficulties (impotence) during hormonal therapy. Things often return to normal after you stop taking the drug, but some men continue to have difficulties after treatment is over. Your doctor can prescribe treatments to help with erection difficulties but these don't affect sex drive.

If you need support [coping with sexual difficulties](#), your nurse or doctor can give you information and refer you for specialist support services.

### **Muscle or bone pain**

If you have soreness or stiffness in your muscles or bones, your doctor can prescribe painkillers to ease this.

### **Urinary tract infections (UTI)**

Speak to your doctor if you develop symptoms of a urinary tract infection. Symptoms include cloudy or smelly urine, pain or discomfort when passing urine.

### **Diarrhoea**

Occasionally, abiraterone can cause diarrhoea. Drink plenty of fluids if you have diarrhoea – at least 2 litres (about 3 pints) a day. Your doctor can prescribe anti-diarrhoea tablets if needed.

### **Skin rashes**

Occasionally people develop a mild skin rash. This often gets better without treatment. Tell your doctor if you have a rash.

### **Changes to your heartbeat**

Abiraterone may cause changes to your heartbeat. If this happens, it's usually temporary and can be treated with medication. You will have checks on your heart before and during treatment. You'll also have regular blood tests to check a chemical in the blood called potassium.

Changes in your potassium levels can affect the normal rhythm of the heart. Muscle weakness or twitching can also be signs that the level of potassium in your blood is low. You should contact your doctor or nurse if you have any of these symptoms.

## **Possible side effects of abiraterone with long term use**

### **Effect on liver**

Abiraterone can sometimes affect the liver. Your doctor will do regular blood tests to check your liver. Usually any effect is mild and you can continue to take abiraterone.

### **Raised blood sugar levels**

Steroids can raise your blood sugar levels. Your nurse will check your blood regularly for this. They may also test your urine for sugar. Symptoms of raised blood sugar include feeling thirsty, needing to pass urine more often and feeling tired. Tell your doctor or nurse if you have these symptoms.

If you have diabetes, your blood sugar levels may be higher than usual. Your doctor will talk to you about how to manage this. You may need to adjust your insulin or tablet dose.

### **Bone thinning (osteoporosis)**

Taking abiraterone will, over time, increase your risk of bone thinning (osteoporosis). In some men this can increase the risk of a broken bone (fracture). Your doctor can give you advice on how this can be monitored and treated if needed. Regular walking and resistance exercises, such as lifting weights, can help to keep your bones strong. Eating a healthy diet, not smoking and sticking to sensible drinking guidelines will also help to protect your bones. Let your doctor know if you have any discomfort in your bones or joints. We have more information on our website about bone health.

**Always let your doctor or nurse know about any side effects you have. There are usually ways in which they can be controlled or improved.**

### **Other information about abiraterone**

#### **Other medicines**

Abiraterone can interact with other drugs. This includes medicines you can buy in a shop or chemist. Tell your doctor about any medicines you are taking, including ones you can buy for yourself, complementary therapies, vitamins and herbal drugs.

#### **Contraception**

Your doctor will advise you not to father a child during treatment. This is because the drugs may harm a developing baby. It's important to use effective contraception during and for a few months after treatment. You can talk to your doctor or nurse about this.

#### **Medical treatment**

If you need to go into hospital for any reason other than cancer, always tell the doctors and nurses that you are taking abiraterone. Explain you are taking hormonal therapy and that no one should stop or restart without advice from your cancer doctor. Give them contact details for your cancer doctor so they can ask for advice.

#### **References and thanks**

The information in this section has been produced in accordance with the following sources and guidelines: British National Formulary. [www.bnf.org/bnf/index.htm](http://www.bnf.org/bnf/index.htm) (accessed June 2014) electronic Medicines Compendium (eMC). [www.medicines.org.uk](http://www.medicines.org.uk) (accessed June 2014).

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If you'd like further information on the sources we use, please feel free to [contact us](#).

#### **Thanks**

With thanks to Kavita Kantilal, Advanced Pharmacist - Electronic Prescribing , who reviewed this edition.