

**Name of Journal:** *World Journal of Gastroenterology*

**Manuscript NO:** 64062

**Manuscript Type:** REVIEW

**Minimally invasive image-guided therapy of primary and metastatic pancreatic cancer**

Bibok A *et al.* Image-guided therapies of pancreatic cancer

Andras Bibok, Dae Won Kim, Mokenge Malafa, Bela Kis

### Abstract

Pancreatic cancer is a challenging malignancy with limited treatment options and poor life expectancy. The only curative option is surgical resection, but only 15%-20% of patients are resectable at presentation because more than 50% of patients has distant metastasis at diagnosis and the rest of them has locally advanced pancreatic cancer (LAPC). The standard of care first line treatment for LAPC patients is chemotherapy

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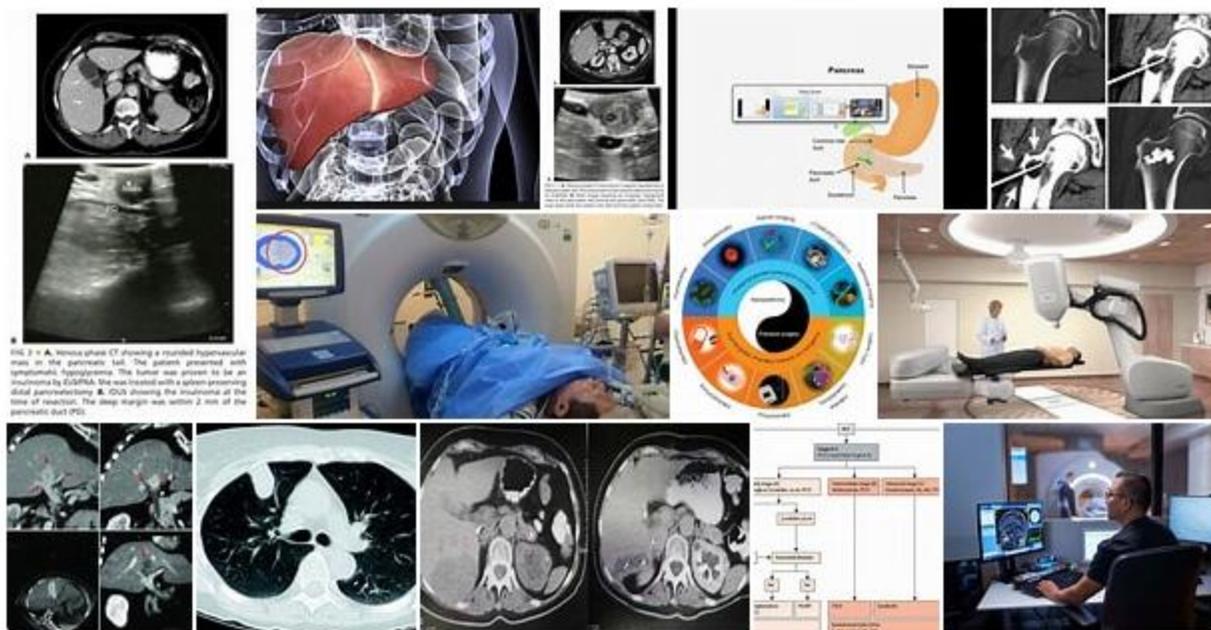
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Minimally invasive pancreatic procedures are demanding, requiring surgeons who already have expertise with conventional approaches. ... Image-Guided Radiation Therapy ... Metastatic Pancreati...

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<https://pubmed.ncbi.nlm.nih.gov/29204695>

DOI: 10.1007/s00270-017-1843-6. Abstract. Introduction: Percutaneous image-guided ablation is an emerging minimally invasive therapy for patients with metastatic bone disease for whom radiation...

Cited by: 11

Author: Yuntong Ma, Adam N. Wallace, Saiama ...

Publish Year: 2017

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Radiofrequency Ablation (RFA) is a **minimally invasive, image-guided therapy** used to treat **primary** or **metastatic cancer** in a variety of organs including the liver, kidney, lung, adrenal gland, and bone. The interventional radiologist uses CT imagery to place a probe directly into the tumor.

**Interventional Radiology - Doylestown Health**  
[www.doylestownhealth.org/services/medical-imaging/services/interventional-radiol...](http://www.doylestownhealth.org/services/medical-imaging/services/interventional-radiol...)

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[PDF] **Locoregional Treatment of Metastatic Pancreatic Cancer ...**

<https://www.mdpi.com/2072-6694/13/7/1608/pdf>

Mar 31, 2021 · therapies include surgical, as well as minimally invasive **image-guided therapies** such as ablation and embolization. Ablative strategies utilize thermal or electrical energy, or highly focused radiation beams for the focal destruction of tumor tissue, and include, but are not

Author: Florentine E. F. Timmer, Bart Geboers, S... Publish Year: 2021

[Image-guided, minimally invasive surgery and other local ...

<https://www.ncbi.nlm.nih.gov/pubmed/30030546>

BACKGROUND: The incidence of **primary** liver tumors is rising. Modern **minimally invasive, image-guided** procedures offer a potentially curative **therapy** option. OBJECTIVE: The aim of this study was to evaluate the multitude of **image-guided minimally invasive** procedures concerning their evidence-based effect on local tumor control and overall survival.

Cited by: 1 Author: D. L. Stippel, R. Wahba, C. J. Bruns, A. Bunc...

Publish Year: 2018

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**The role of interventional radiology in the treatment of ...**

<https://pubmed.ncbi.nlm.nih.gov/33156695>

Interventional radiology (IR) provides **minimally invasive therapeutic and palliative** options for the **treatment** of **pancreatic cancer** depending on the stage of the disease. IR plays a critical, and also a very effective role, in both pre- and post-operative care of the patients with early stage resectable **disease** and also in **palliative treatment** of the patients with locally advanced or **metastatic disease**.

Author: Aycan Uysal, Emre Unal, Ali Devrim Kar... Publish Year: 2021

**Pancreatic Cancer Clinical Trials - National Cancer Institute**

<https://www.cancer.gov/about-cancer/treatment/...>

Weight loss occurs in **pancreatic cancer** patients and is common in a multitude of other cancers. Patients with **metastatic cancer** and weight loss sometimes are not able to receive **treatment** due to physical weakness or debility. Disulfiram is a potential inhibitor of muscle degradation and may reduce tumor induced muscle wasting.

**Interventional Radiology - Doylestown Health**

<https://www.doylestownhealth.org/services/medical...>

Jun 10, 2021 · **Radiofrequency Ablation (RFA)** is a minimally invasive, image-guided therapy used to treat primary or metastatic cancer in a variety of organs including the liver, kidney, lung, adrenal gland, and bone. The interventional radiologist uses CT imagery to place a probe directly into the tumor.

**Pancreatic Cancer - StatPearls - NCBI Bookshelf**

<https://www.ncbi.nlm.nih.gov/books/NBK518996>

Apr 13, 2021 · **Pancreatic cancer** refers to the carcinoma arising from the **pancreatic duct cells, pancreatic ductal carcinoma**. It is the fourth leading cause of **cancer** deaths in the United States. The 5-year survival rate in the United States ranges from 5% to 15%. The overall survival rate is only 6%. Surgical resection is the only current option for a cure, but only 20% of **pancreatic cancer** is surgically ...

**Pancreatic Cancer Treatment in DC - MedStar Washington**

<https://www.medstarwashington.org/our-services/...>

Laparoscopic **Pancreaticoduodenectomy** (Whipple Procedure): This procedure targets the same area as a **pancreaticoduodenectomy** but is done with a **minimally invasive** approach. That makes it even more complex—meaning it should only be done by experienced surgeons like ours.

**Interventional Radiology & Image-Guided Therapy ...**

<https://www.radiology.northwestern.edu/research/...>

Dr. Mouli's lab uses imaging in the treatment of solid organ malignancies including primary and metastatic liver cancer, pancreatic cancer, and prostate cancer. His interests include translational research focused on the application of novel minimally invasive image-guided therapies for cancer treatment, as well as the development of novel drug delivery systems.

[PDF] **Review Interventional Nanotheranostics of Pancreatic ...**

[www.thno.org/v06p1393.pdf](http://www.thno.org/v06p1393.pdf)

**Image-guided interventional** techniques in combination with multi-functional NPs may offer some solutions to these problems. Interventional oncology includes a variety of **minimally invasive, real-time image-guided** procedures for the diagnosis and treatment of **cancer** and is generally associated with fewer complications, faster recovery times, and

## Pancreatic Cancer

Medical Condition

Cancer of pancreas, an organ which is behind the lower part of the stomach. This causes abdominal pain, jaundice, itchy skin, fatigue and weight loss.

- 📊 Rare (Fewer than 200,000 cases per year in US)
- 🧪 Often requires lab test or imaging
- 👨‍⚕️ Treatable by a medical professional
- 🕒 Can last several months or years

The exact cause of pancreatic cancer is unknown. Risk factors include diabetes, chronic pancreatitis and stomach ulcer. In the early stage, it is asymptomatic. Common symptoms at later stages are weight loss and abdominal pain. Treatment depends on the location of tumor, age and general health. Treatment includes surgery, chemotherapy and radiation.

### Symptoms

Early stage of pancreatic cancer may be asymptomatic. Symptoms will show up only when the disease progresses and include:

- Digestive problems, including abnormal stools, nausea or vomiting
- Pain in the upper abdomen and back
- Loss of appetite
- Sudden weight Loss
- Jaundice (yellowing of the skin and whites of the eyes)
- Very high sugar levels in diabetic patients

### Treatments

Treatment depends on the location of tumor, age and general health. Treatment includes surgery, chemotherapy and radiation.

#### Medication

- **Chemotherapy:** Drugs, either taken orally or through injection, kills the cancer cells. In advanced stages, it only helps control growth of cancer cells.
- 5-Fluorouracil · Capecitabine · Irinotecan · Oxaliplatin

**Medical procedures:** Tumor excision · Distal pancreatectomy · Total pancreatectomy

**Therapies:** Radiation therapy

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### The role of interventional radiology in the treatment of ...

<https://pubmed.ncbi.nlm.nih.gov/33156695>

In this article, we aimed to present the capability and the limitations of IR procedures including: local treatment options of primary and metastatic pancreatic cancer, palliation of biliary and intestinal...

Author: Aycan Uysal, Emre Unal, Ali Devrim Kar... Publish Year: 2021

### Pancreatic Cancer Treatments - MedStar Southern Maryland

<https://www.medstarsouthernmaryland.org/.../pancreatic-cancer-treatments>

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