Objective. One of the techniques, becoming more and more popular in open pancreatic surgery is no-touch PD. Laparoscopic access could bring some advantages to pancreatic resections. The aim of the present study was to determine possibility and safety of laparoscopic no-touch Pancreaticoduodenectomy in patients with periampullary tumors.

Methods. In the period 2015-2017 we performed 12 laparoscopic pancreaticoduodenectomy in the National cancer institute of Ukraine. Of these patients 4 were selected for laparoscopic no-touch pancreaticoduodenectomy.

Results. Conversion rate was 42.8%. We analyzed the results of 4 successful no-touch laparoscopic pancreaticoduodenectomy. The mean duration of surgery was 443 ± 44 minutes (from 370 to 490 minutes). The mean blood loss was 650 ± 269 mL (from 300 to 1000 mL). In 3 patients (75.0%) postoperative complications were recorded in the form of pancreatic fistula grade B. Mortality was zero. After histological evaluation in all patients R0 resection was achieved. One patient died 3 months after the surgery from the reasons neither connected to the surgery, nor the disease. 1 patient has been alive for 11 months being diagnosed a metastatic disease on the 9-th month. 2 patients are alive without signs of recurrence (20 months and 14 months).

Conclusion. Our preliminary results show, that no-touch technique could be done from laparoscopic access in a selected group of patients. Potential advantage is fast rehabilitation of patients with early start of adjuvant chemotherapy. That could be achieved in patients with uncomplicated postoperative period.

Technique of the laparoscopic no-touch PD
We have used the standard port placement. We started the procedure from the dissection of the hepatoduodenal ligament. Lymph nodes of the 12 group were moved to the main hepatic duct. Cystic artery was clipped and transected. Cystic duct was identified and dissected to the common hepatic duct. We did not complete cholecystectomy on this stage of the procedure for better traction, using gallbladder. Hepatic duct was transected just above its connection with the cystic duct. Gastroduodenal artery was clipped and transected (STEP 1).
We proceeded with the transecting of the gastrocolic and hepatocolic ligaments and opening the anterior surface of the pancreatic head and duodenum. In all cases we proceeded with mobilization and transection of the duodenum 4 cm from the pylorus. After mobilization of the lower margin of the pancreas and visualization of the superior mesenteric vein we proceeded with making the tunnel between pancreatic neck and portosplenosenterial confluence and transection of the pancreas. (STEP 2)
The next step was mobilization and transection of the proximal jejunal loop and transferring it to the supracolic position. Then we performed transection of the small venous branches from the superior mesenteric vein. The final step was transection of the meso-pancreas and Kocher maneuver. It was done with the help of the lateral traction of the proximal jejunal loop from the left-inferior to right-superior route (STEP 3).
Strategy of reconstruction did not differ from the standard PD. In cases of small pancreatic duct and soft pancreas we used hybrid procedure with external drainage of the main pancreatic duct.